

APPENDIX TWO

Spectra Relevant to Chapter Four: C-H Bond Functionalizations with Palladium(II): Intramolecular Annulations of Arenes

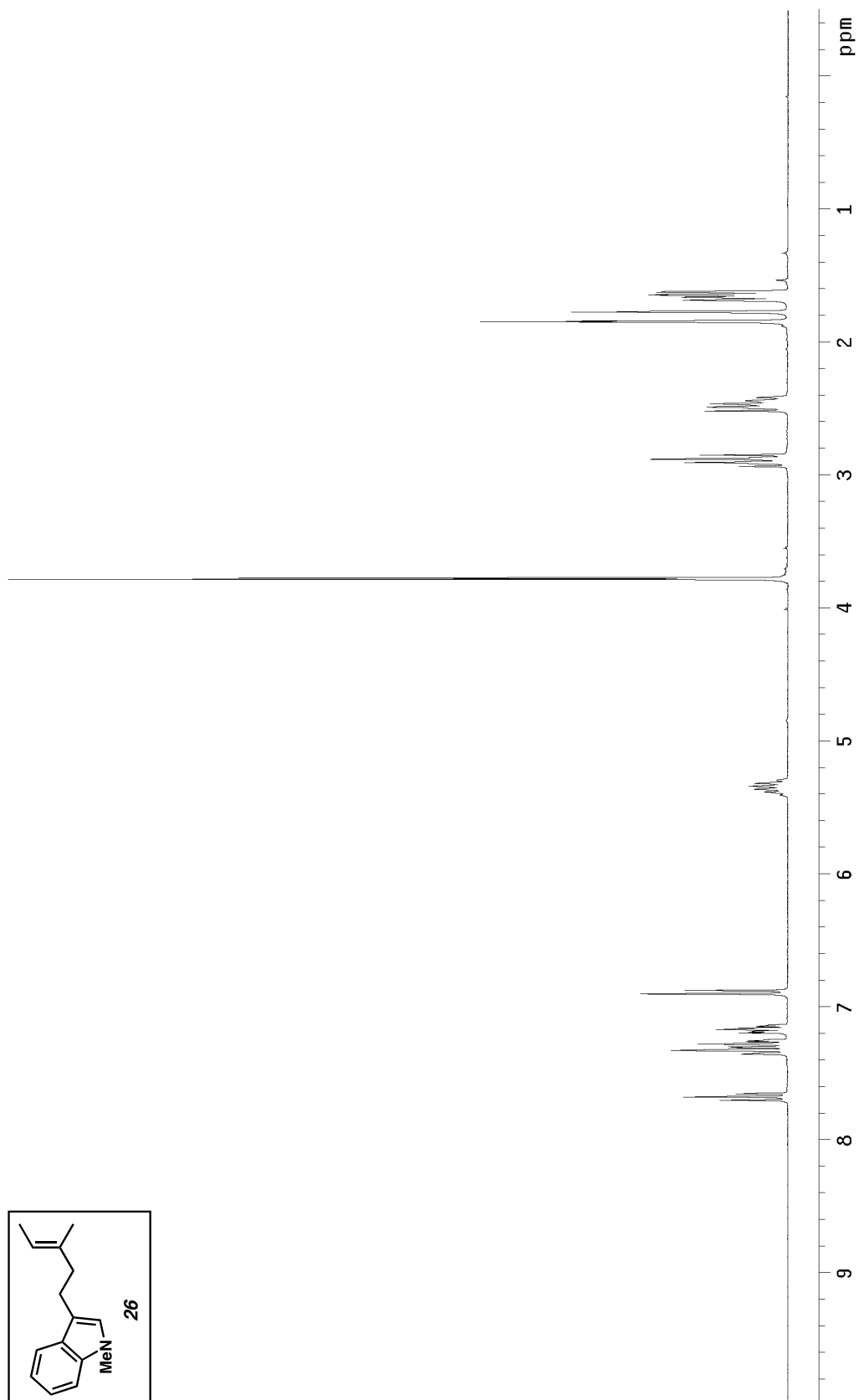
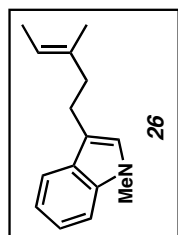


Figure A2.1 ^1H NMR (300 MHz, CDCl_3) of compound **26**.

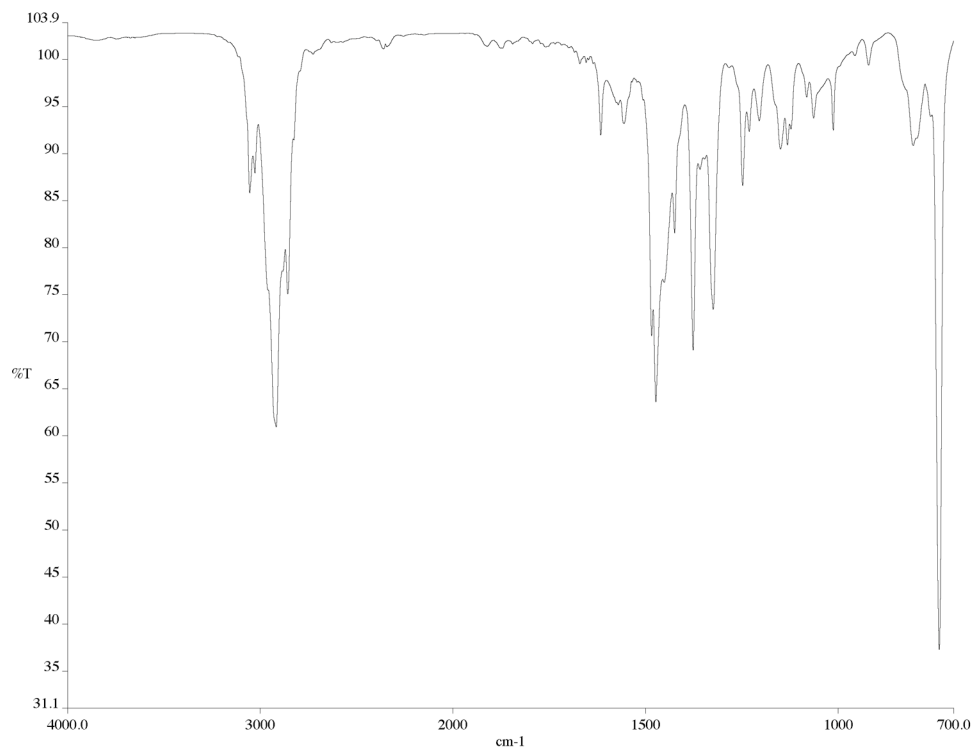


Figure A2.2 Infrared spectrum (thin film/NaCl) of compound **26**.

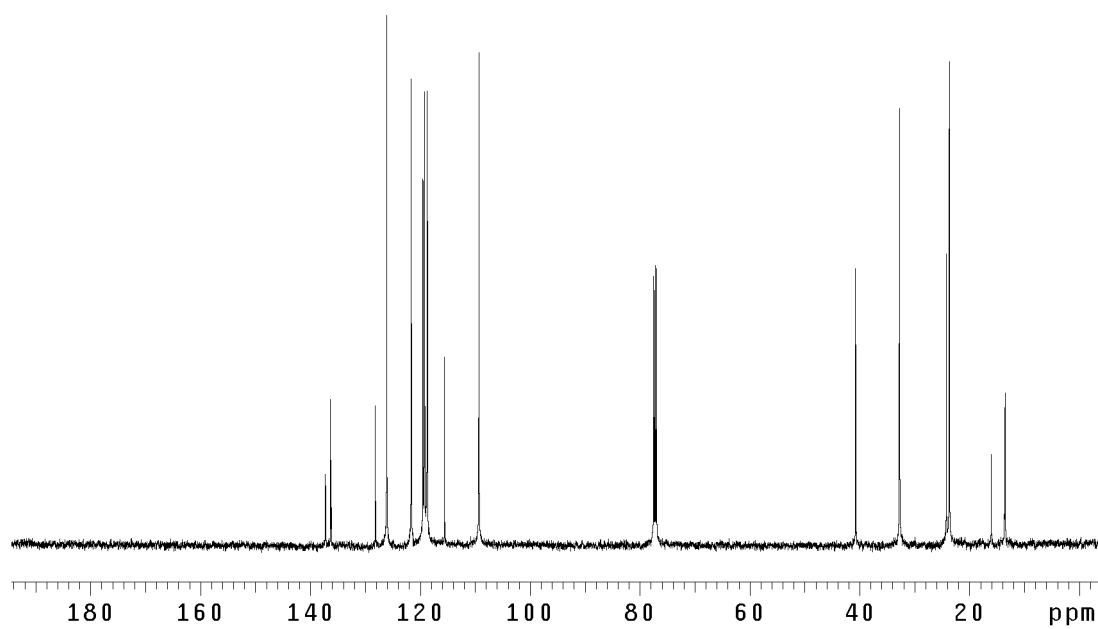


Figure A2.3 ¹³C NMR (125 MHz, CDCl₃) of compound **26**.

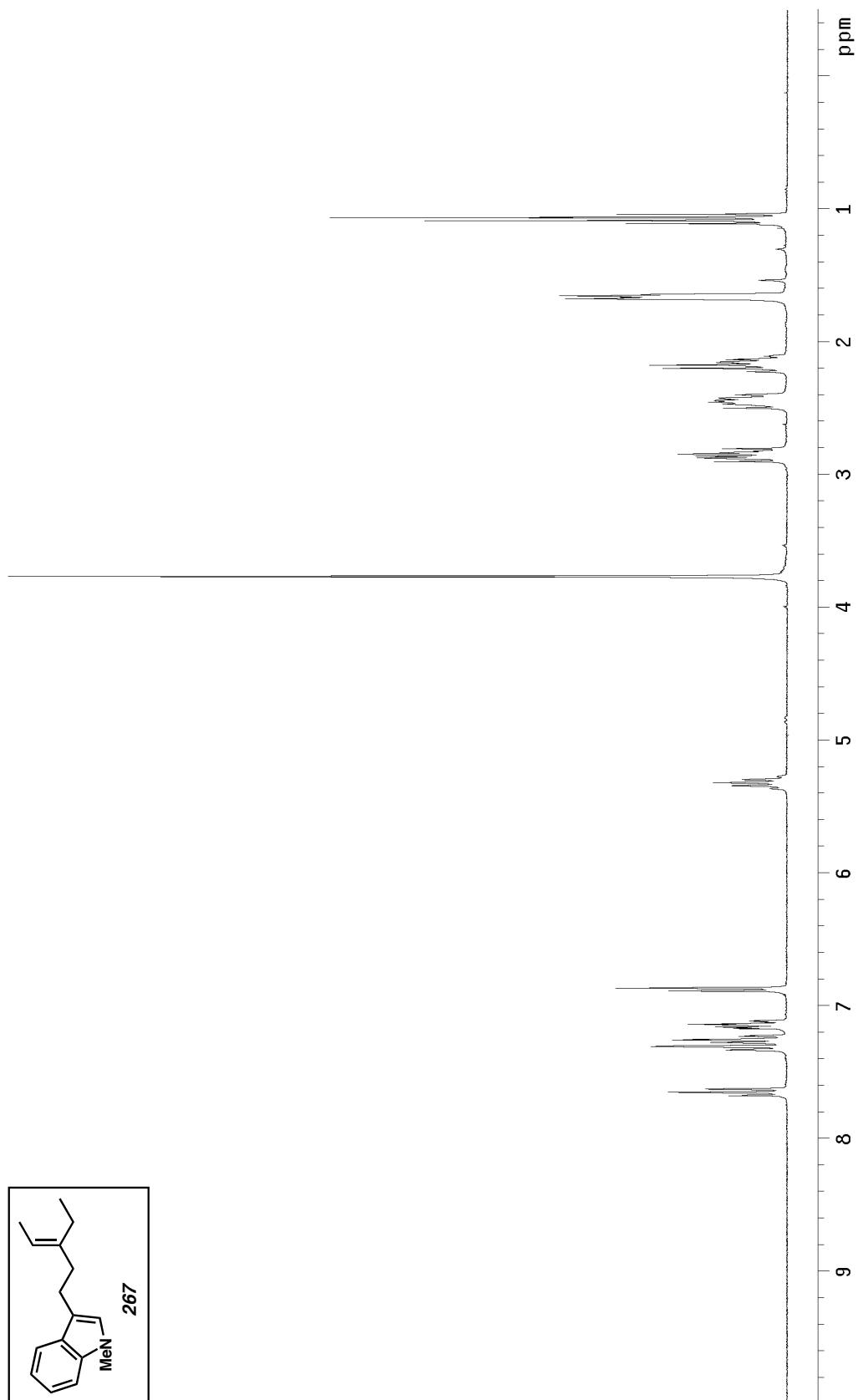
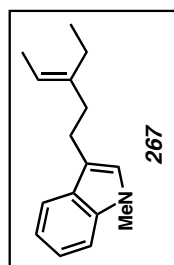


Figure A2.4 ¹H NMR (300 MHz, CDCl₃) of compound **267**.

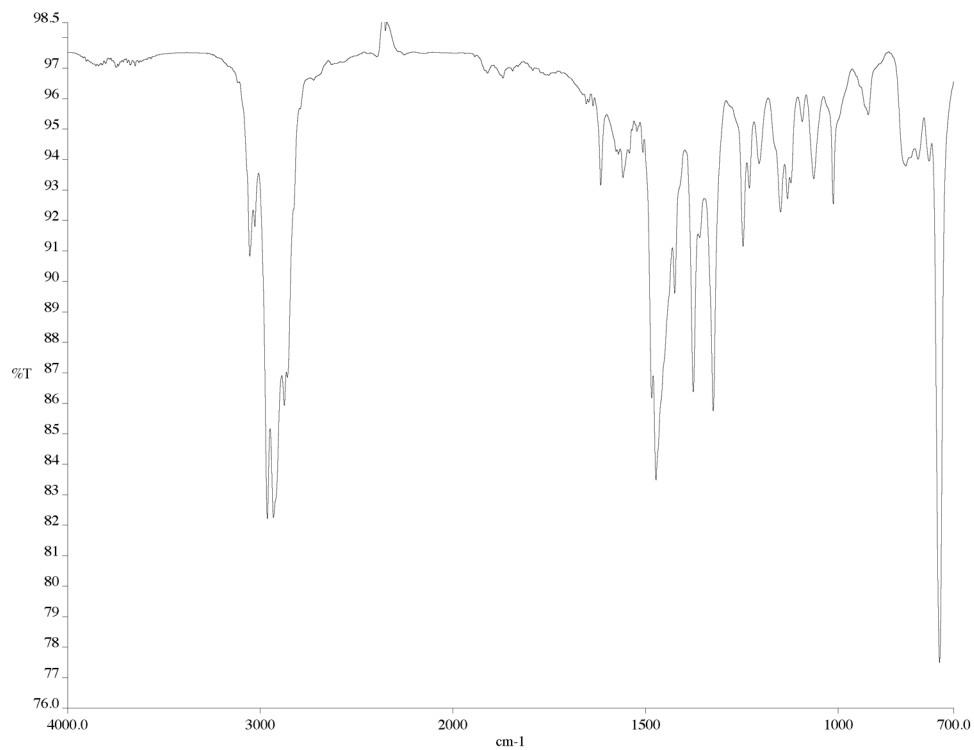


Figure A2.5 Infrared spectrum (thin film/NaCl) of compound **267**.

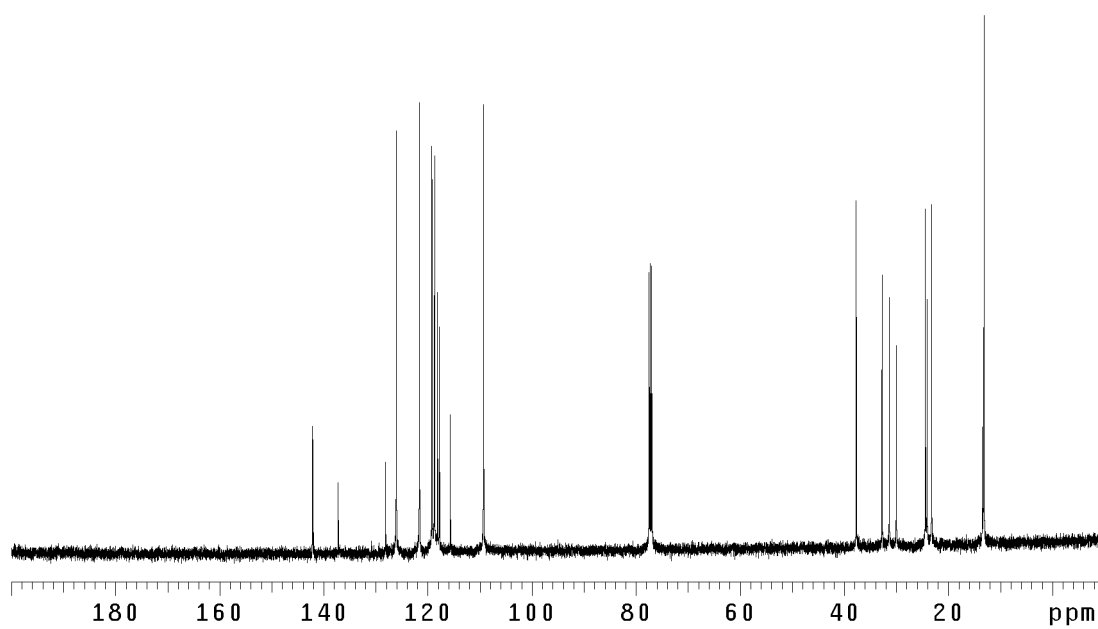


Figure A2.6 ¹³C NMR (125 MHz, CDCl₃) of compound **267**.

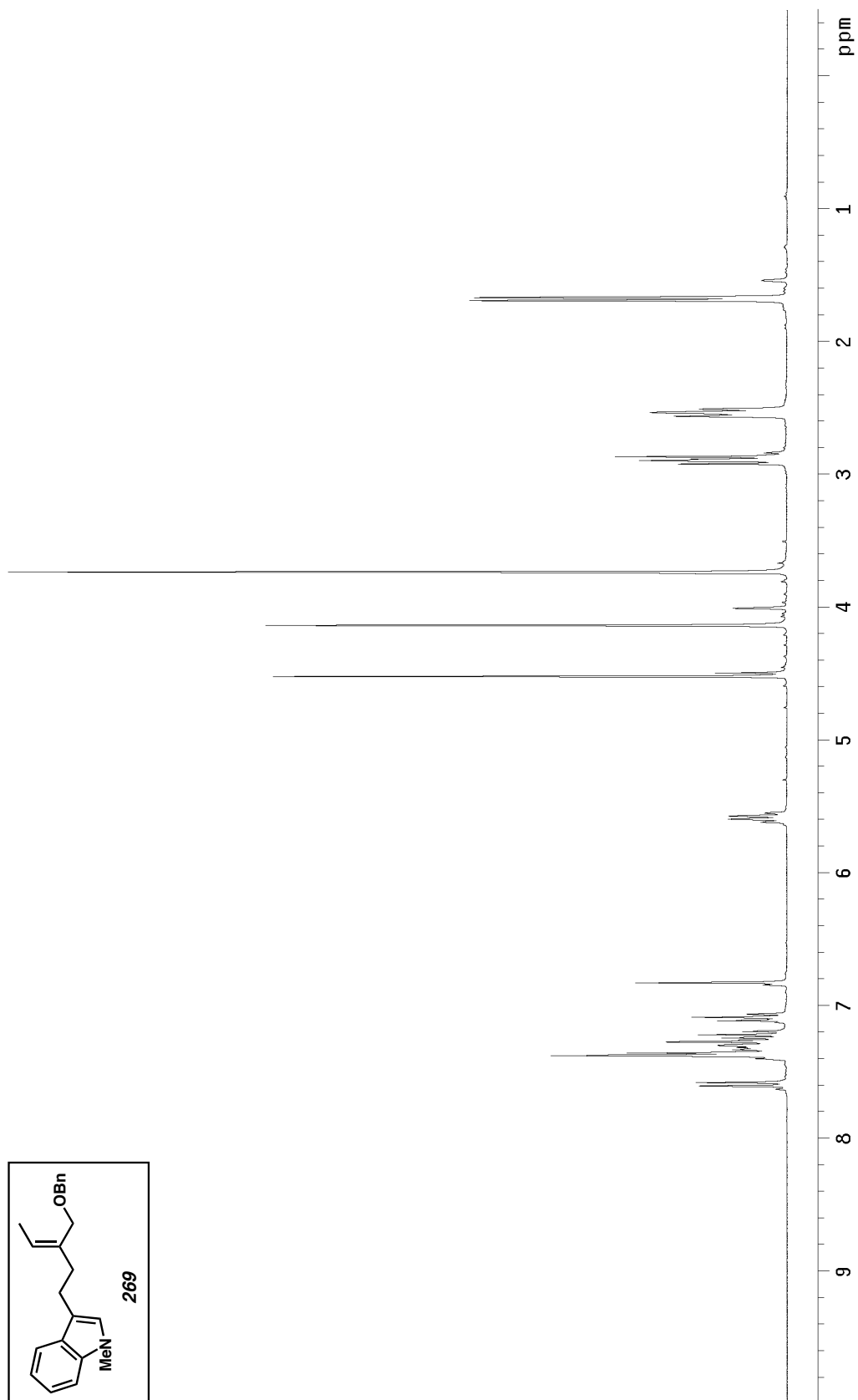
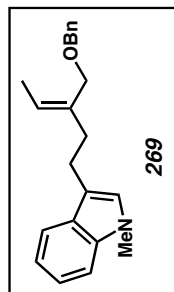


Figure A2.7 ¹H NMR (300 MHz, CDCl₃) of compound **269**.

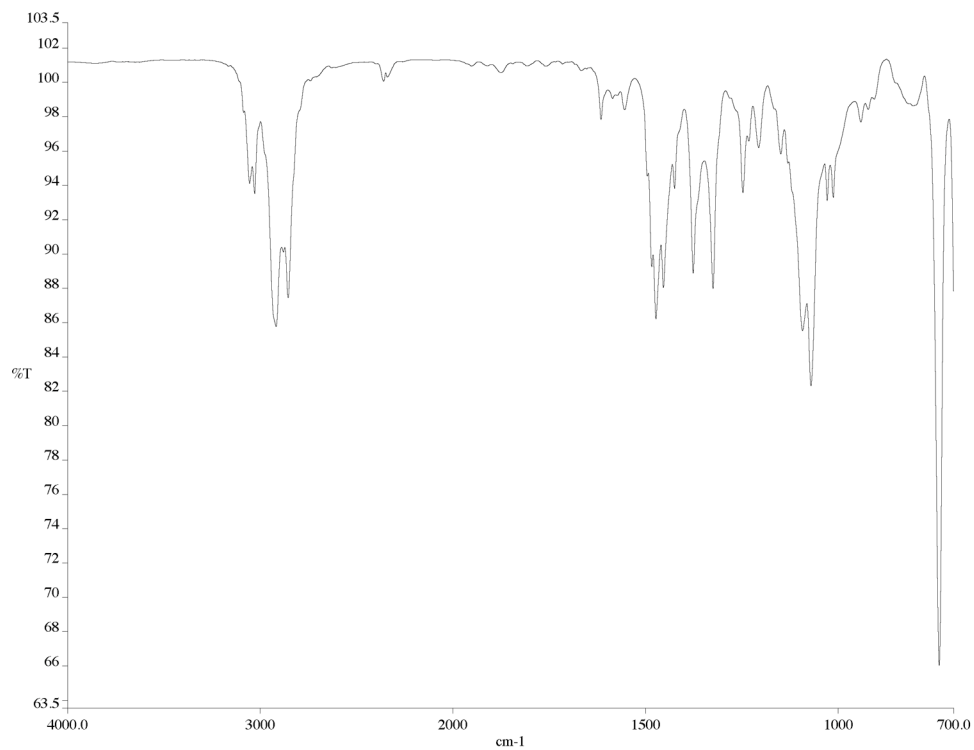


Figure A2.8 Infrared spectrum (thin film/NaCl) of compound **269**.

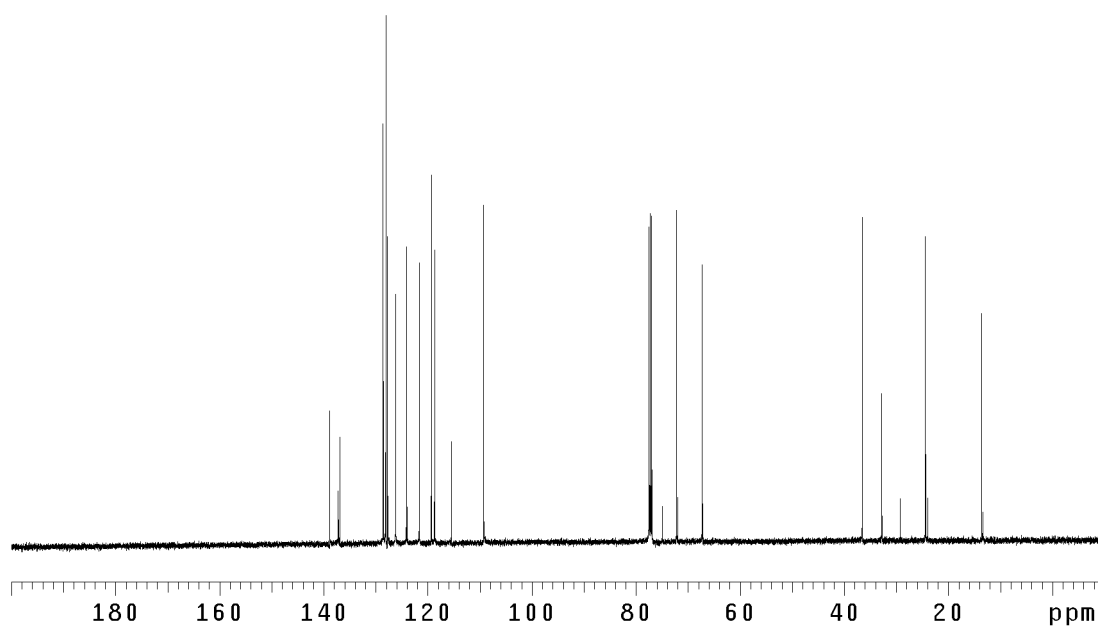


Figure A2.9 ¹³C NMR (125 MHz, CDCl₃) of compound **269**.

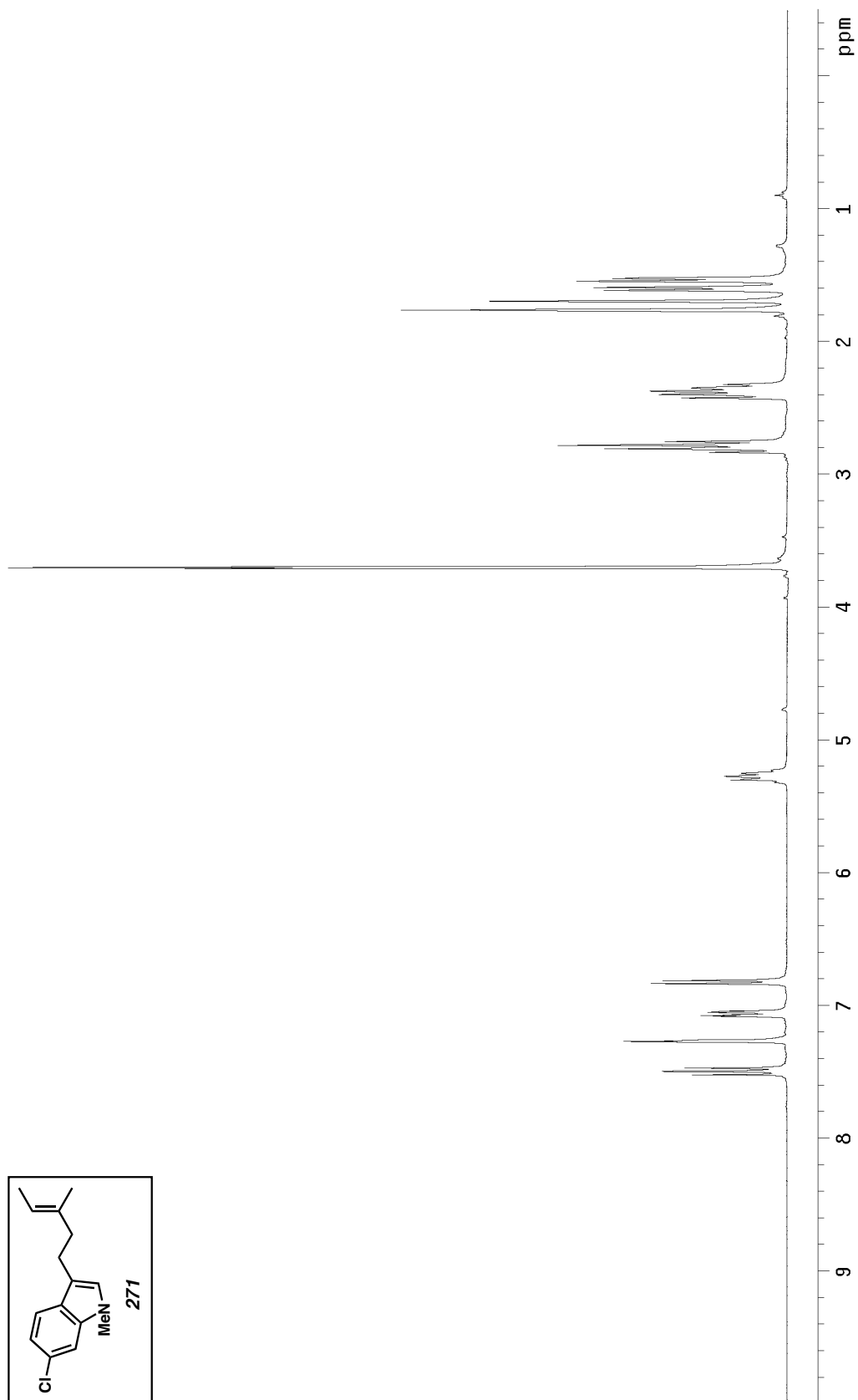
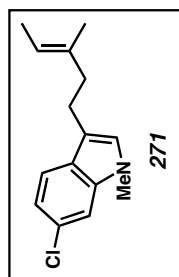


Figure A2.10 ^1H NMR (300 MHz, CDCl_3) of compound 271.

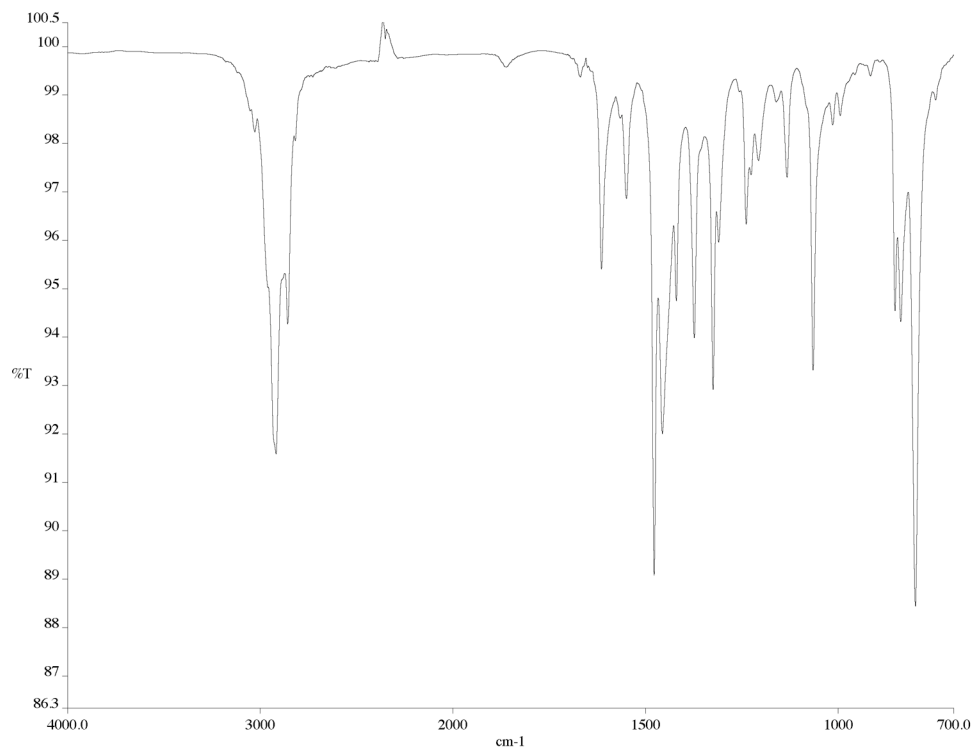


Figure A2.11 Infrared spectrum (thin film/NaCl) of compound **271**.

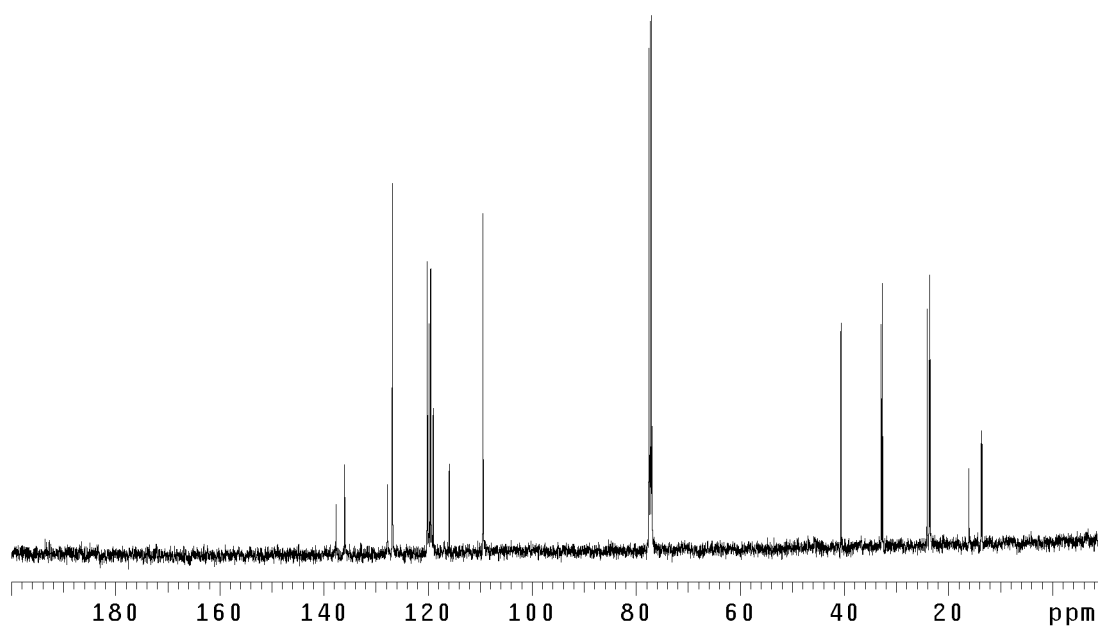


Figure A2.12 ¹³C NMR (125 MHz, CDCl₃) of compound **271**.

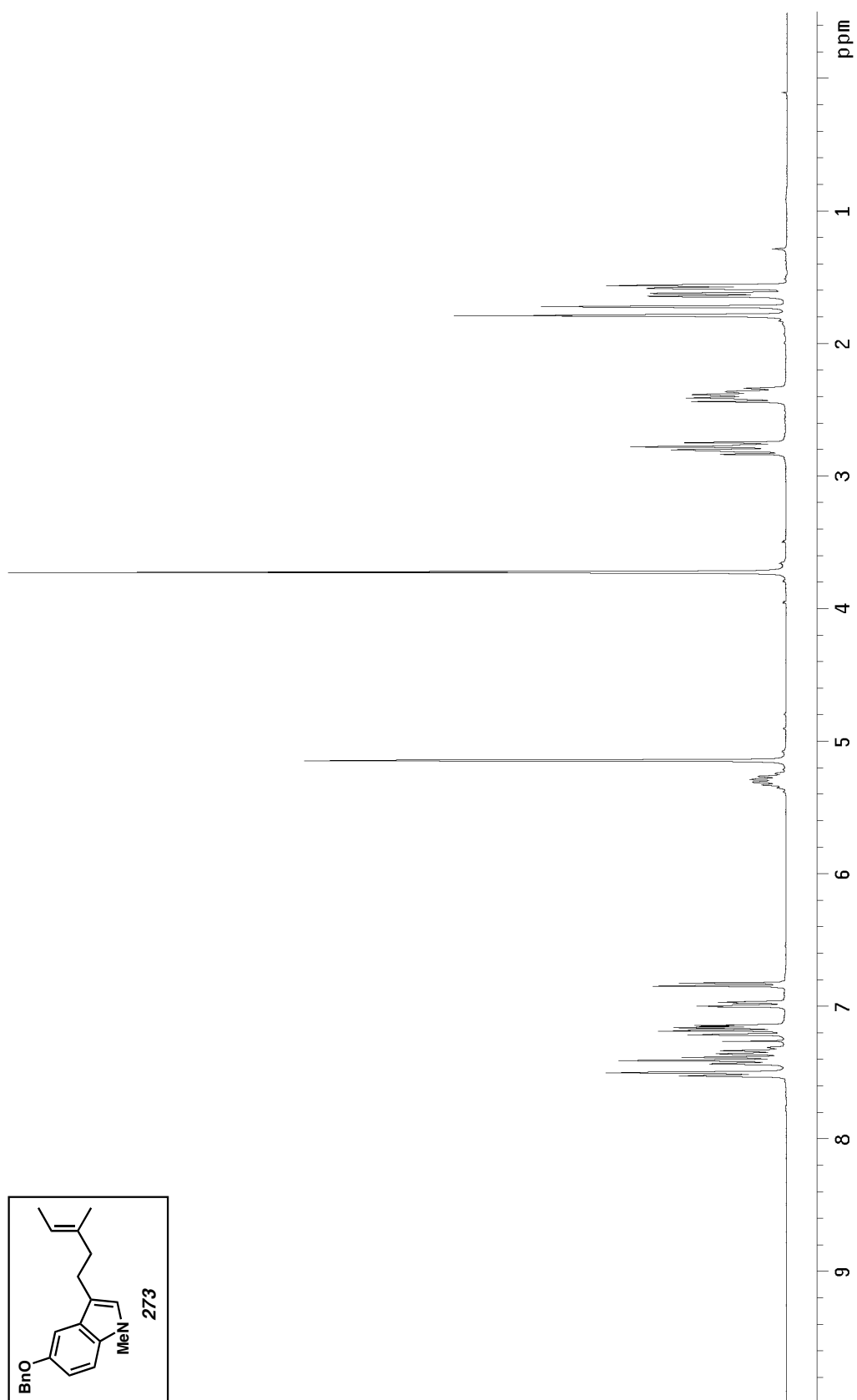
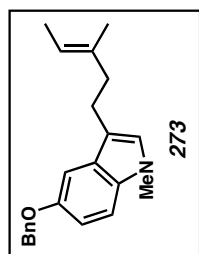


Figure A2.13 ^1H NMR (300 MHz, CDCl_3) of compound **273**.

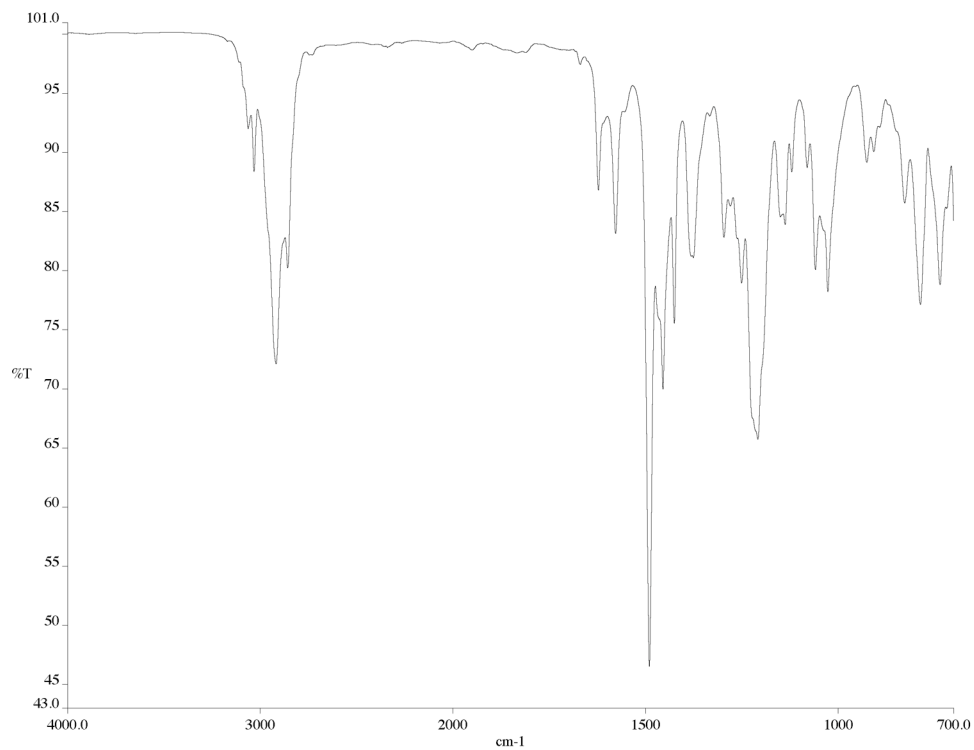


Figure A2.14 Infrared spectrum (thin film/NaCl) of compound **273**.

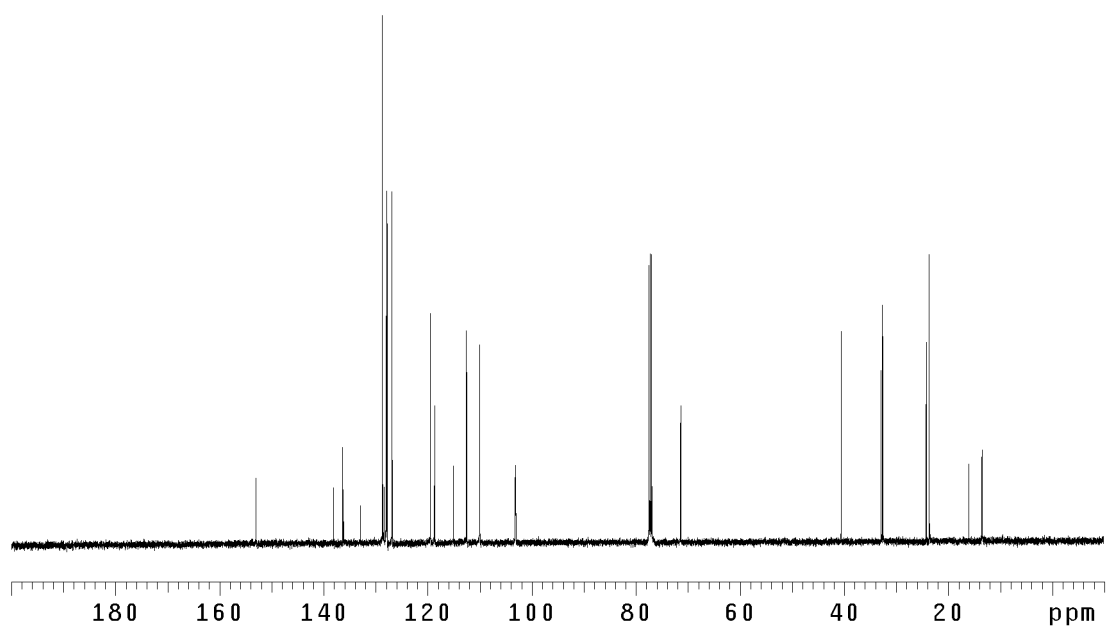


Figure A2.15 ¹³C NMR (125 MHz, CDCl₃) of compound **273**.

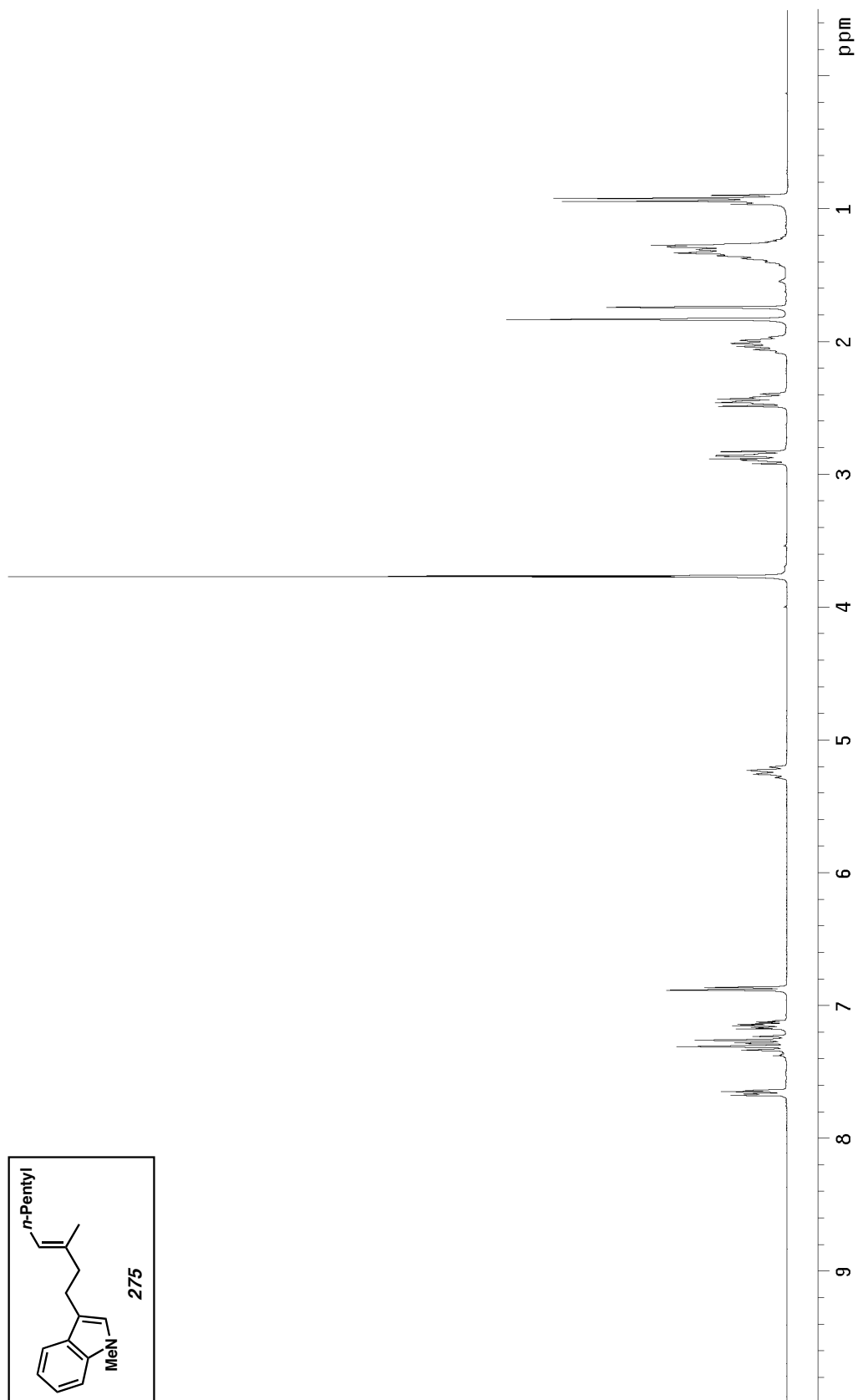
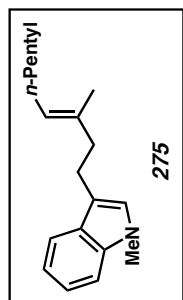


Figure A2.16 ^1H NMR (300 MHz, CDCl_3) of compound 275.

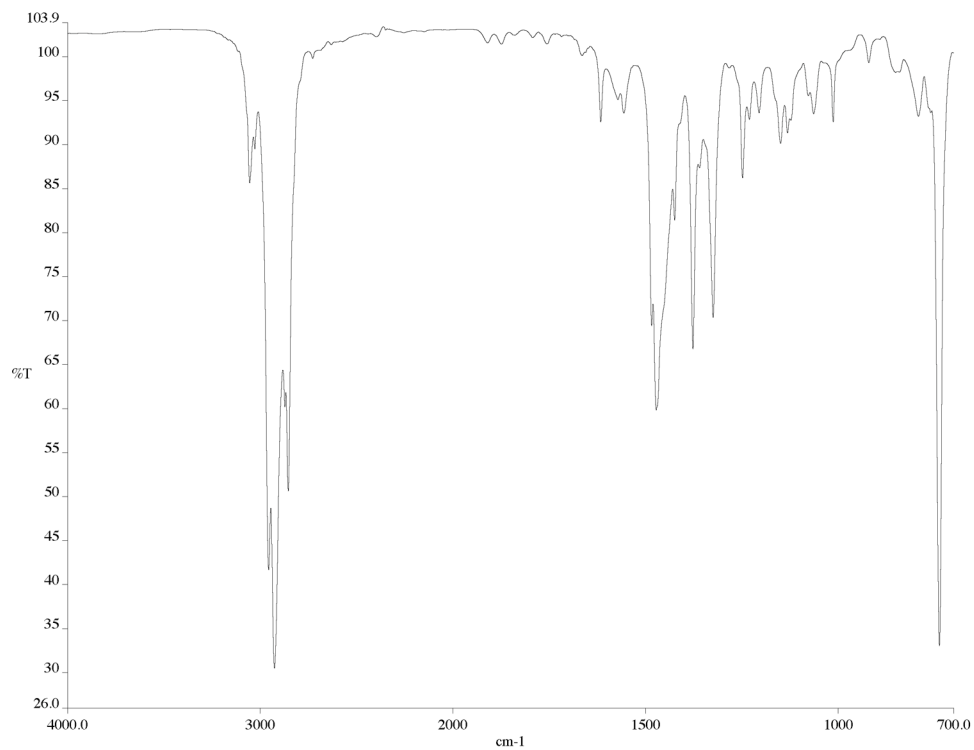


Figure A2.17 Infrared spectrum (thin film/NaCl) of compound **275**.

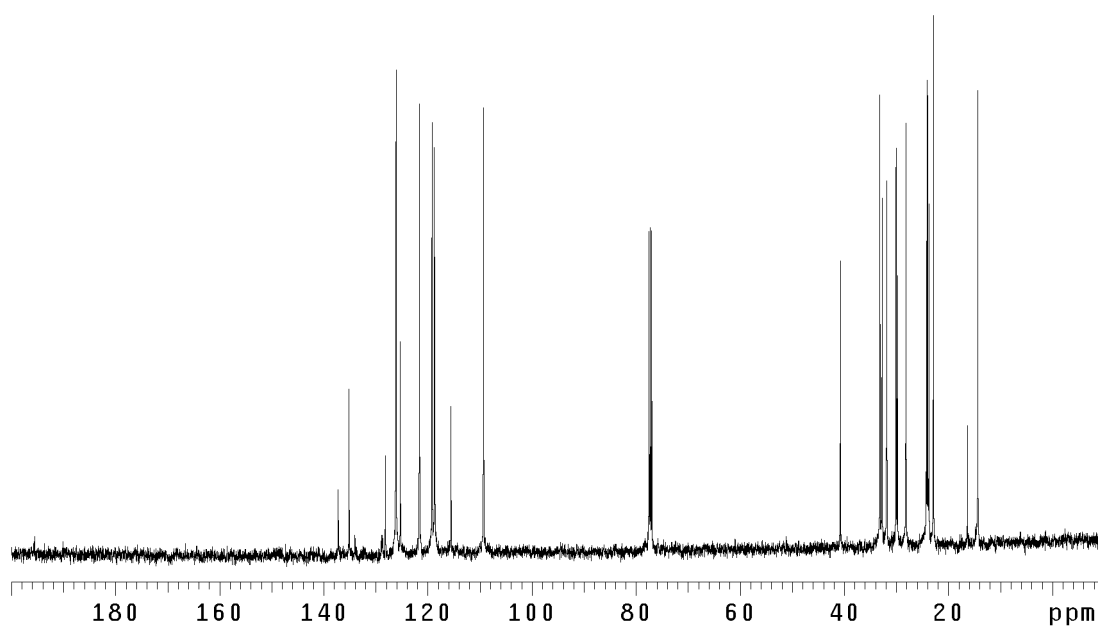


Figure A2.18 ¹³C NMR (125 MHz, CDCl₃) of compound **275**.

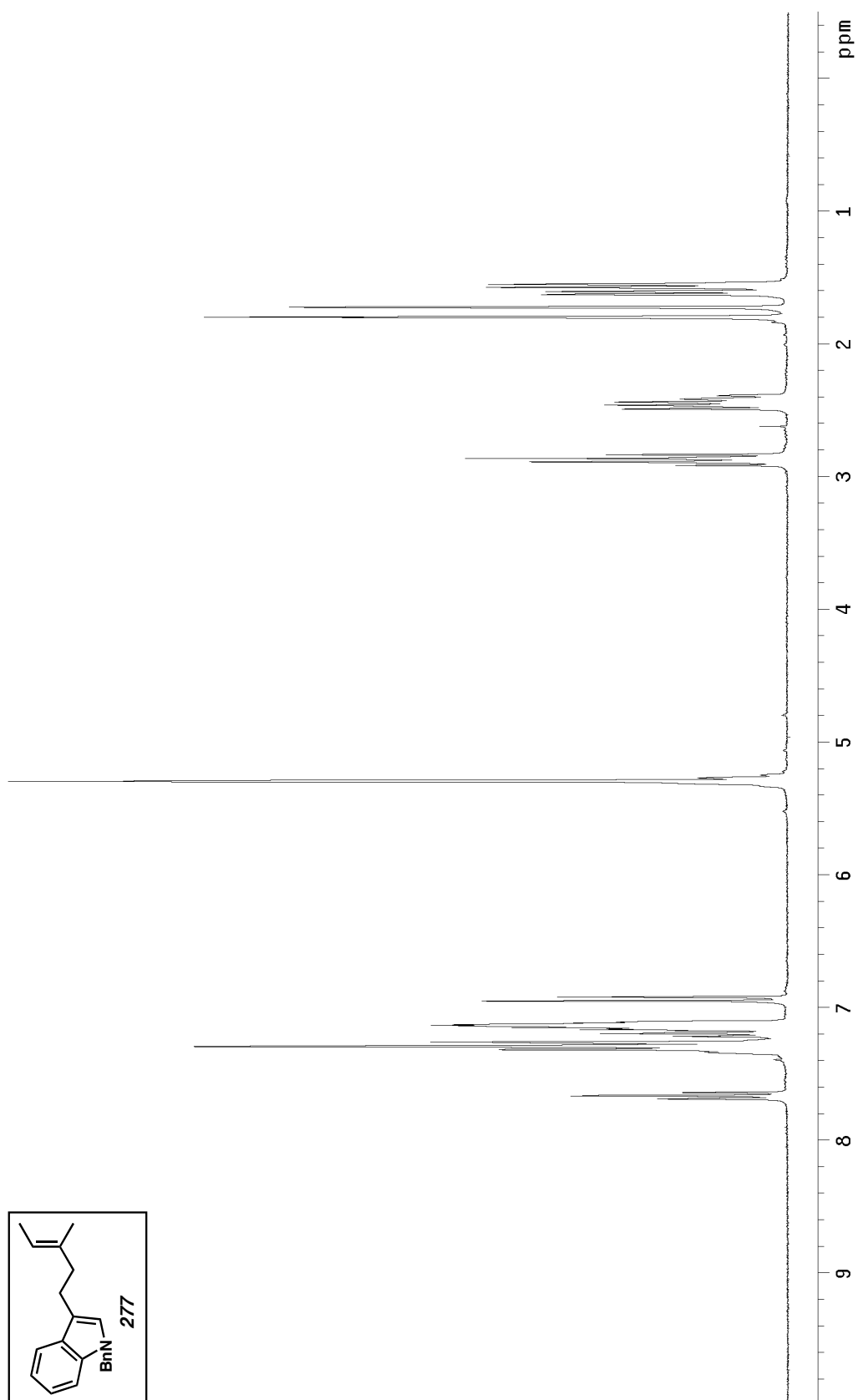


Figure A2.19 ^1H NMR (300 MHz, CDCl_3) of compound **277**.

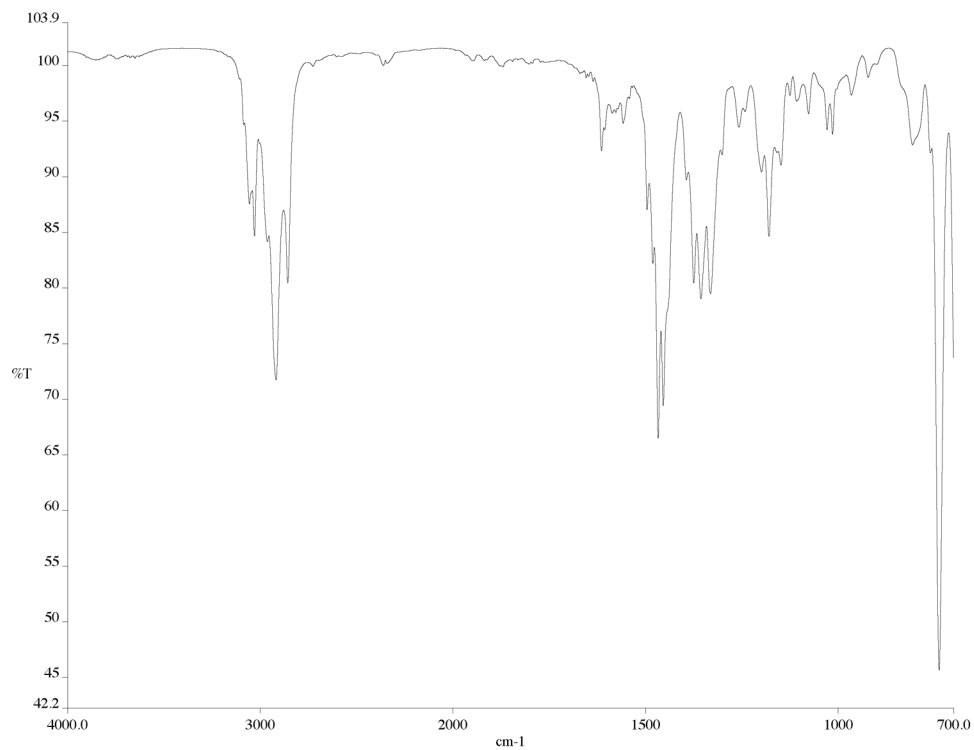


Figure A2.20 Infrared spectrum (thin film/NaCl) of compound **277**.

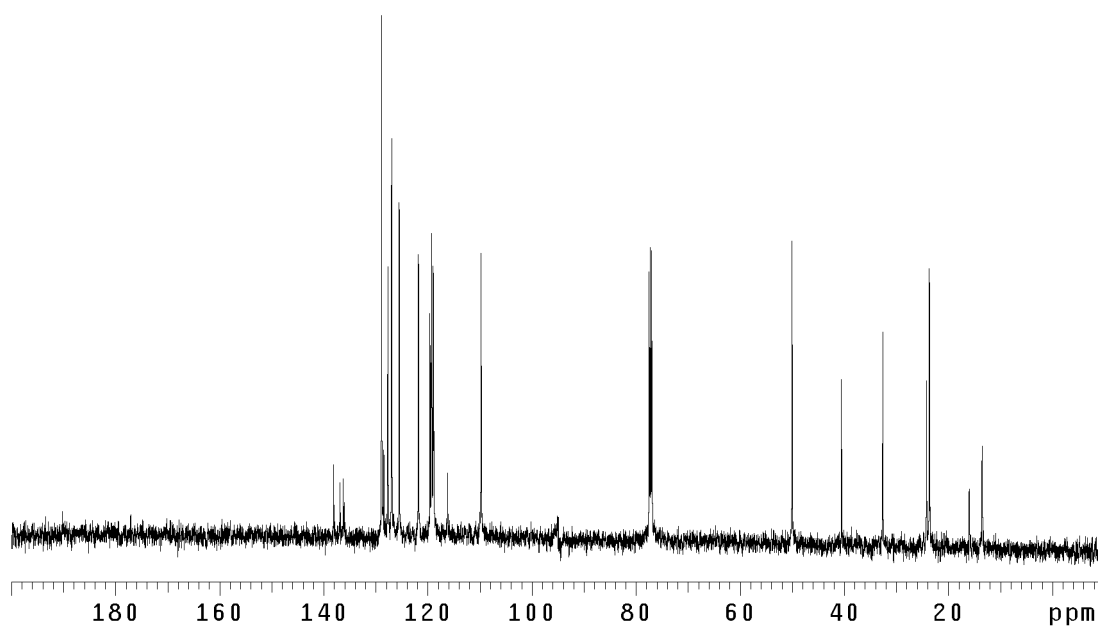


Figure A2.21 ¹³C NMR (125 MHz, CDCl₃) of compound **277**.

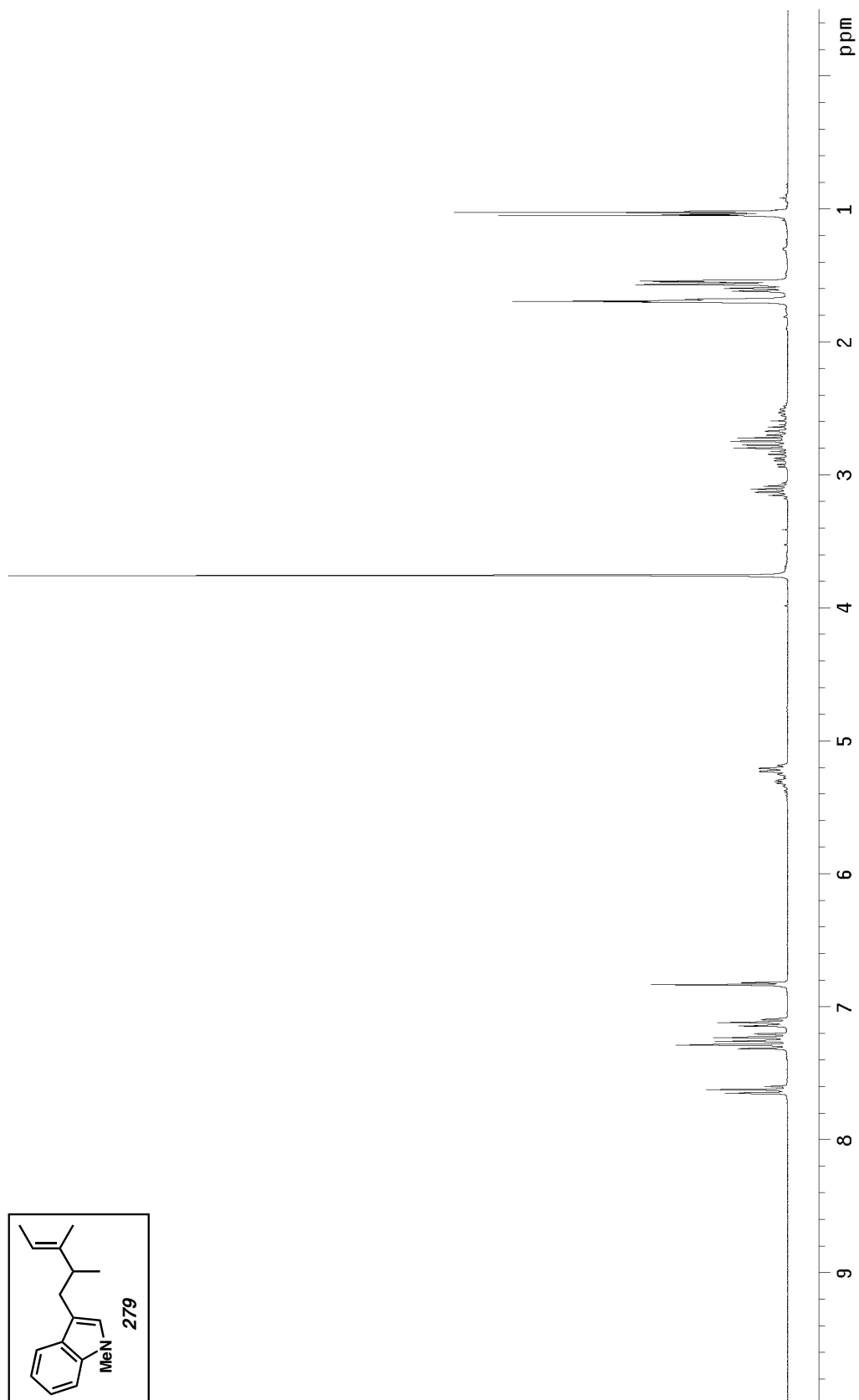
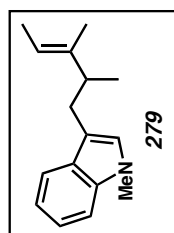


Figure A2.22 ^1H NMR (300 MHz, CDCl_3) of compound 279.

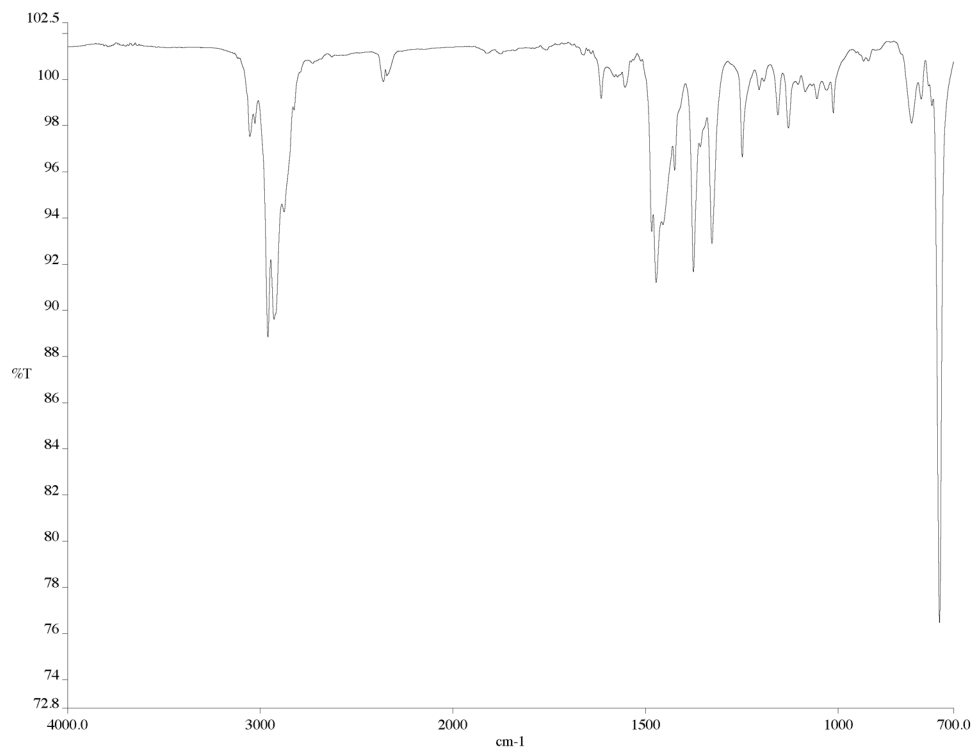


Figure A2.23 Infrared spectrum (thin film/NaCl) of compound **279**.

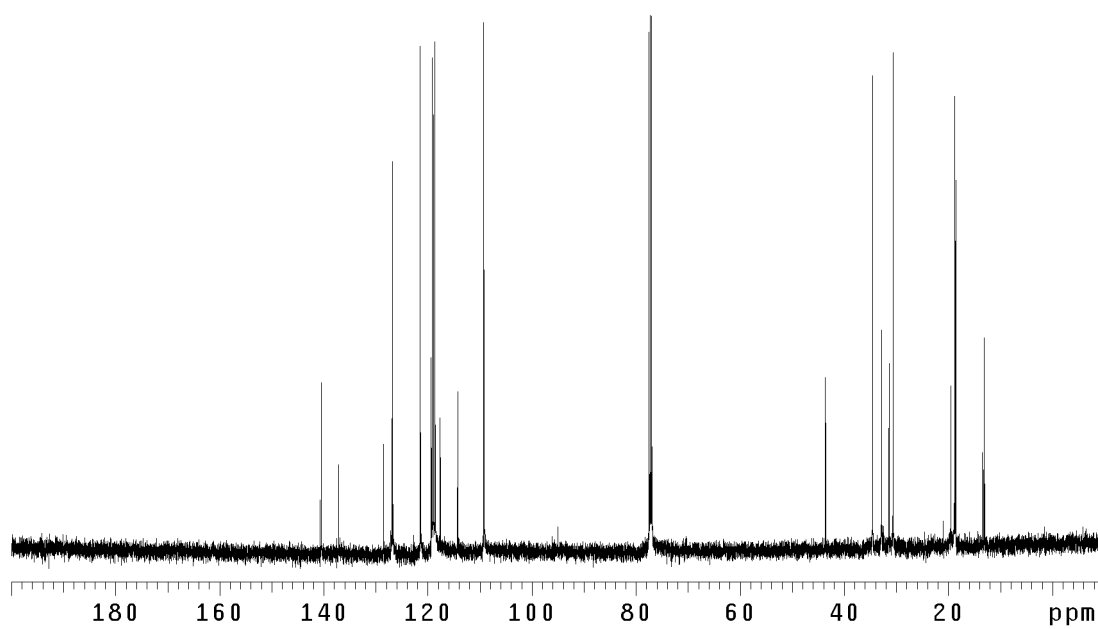


Figure A2.24 ¹³C NMR (125 MHz, CDCl₃) of compound **279**.

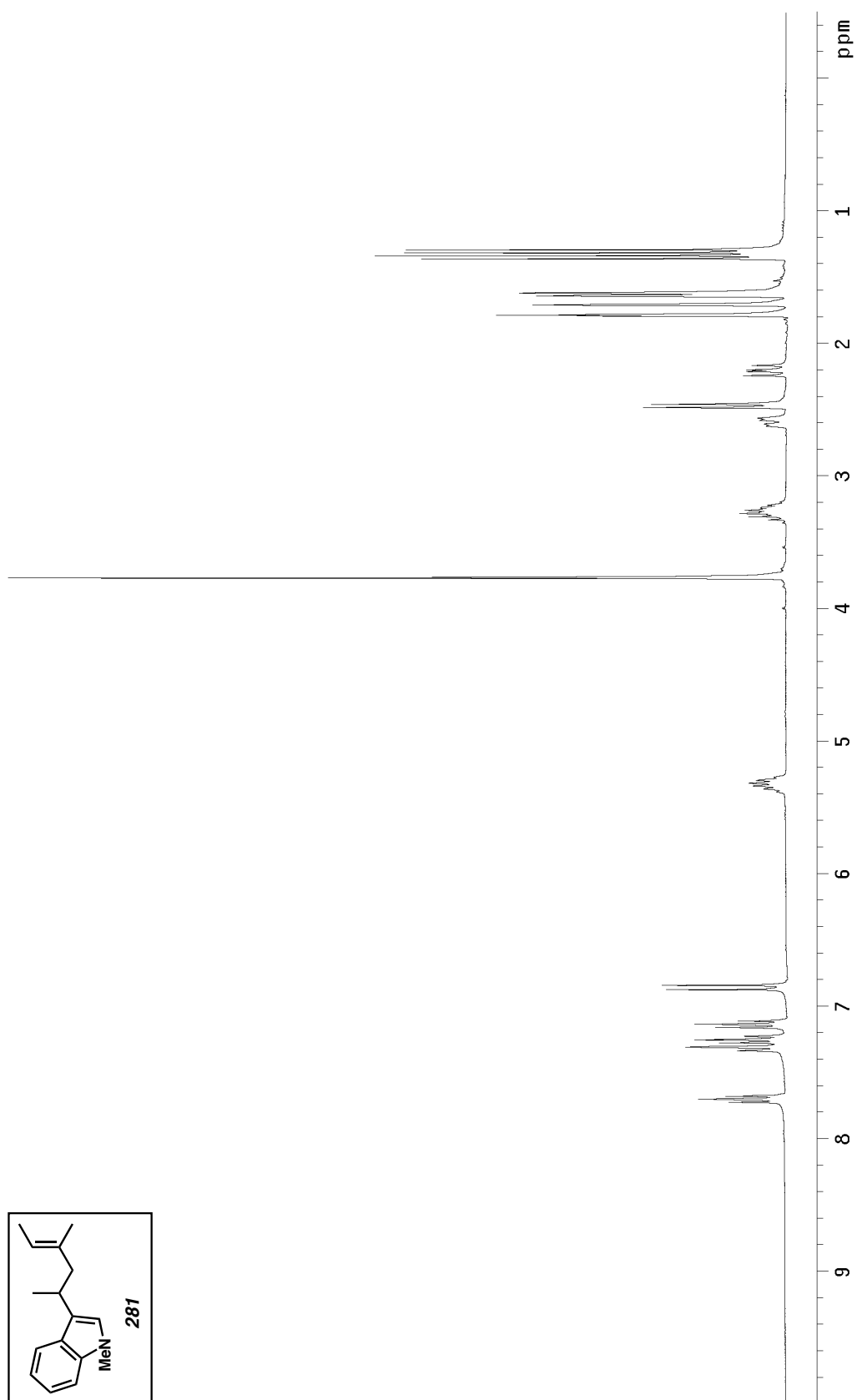
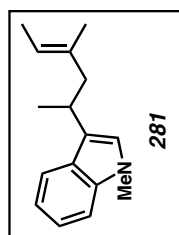


Figure A2.25 ^1H NMR (300 MHz, CDCl_3) of compound **281**.

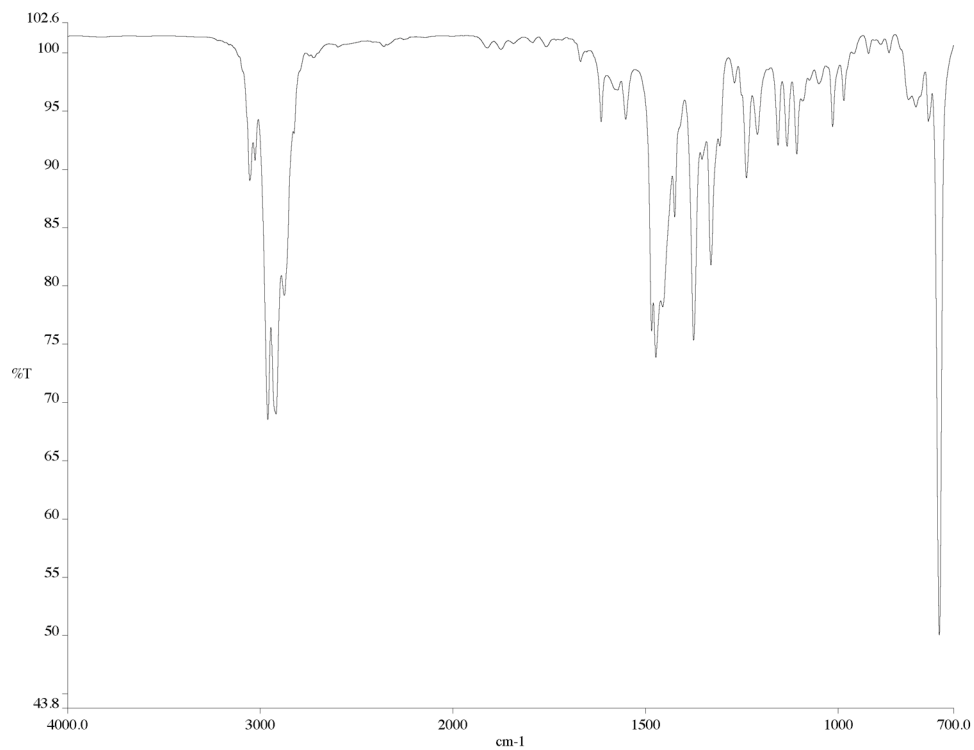


Figure A2.26 Infrared spectrum (thin film/NaCl) of compound **281**.

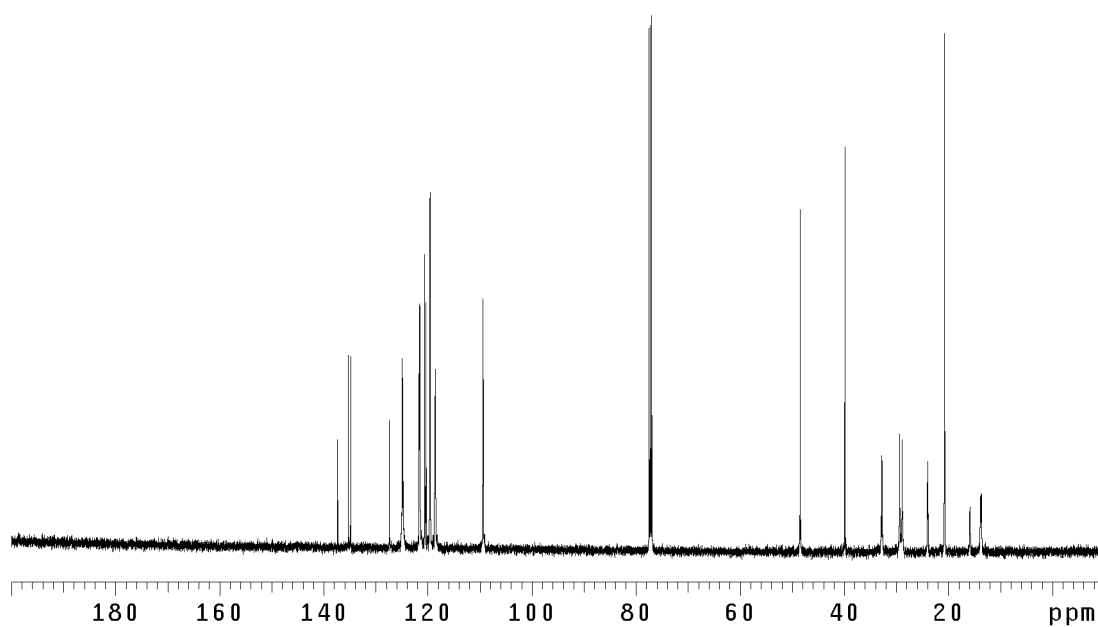


Figure A2.27 ¹³C NMR (125 MHz, CDCl₃) of compound **281**.

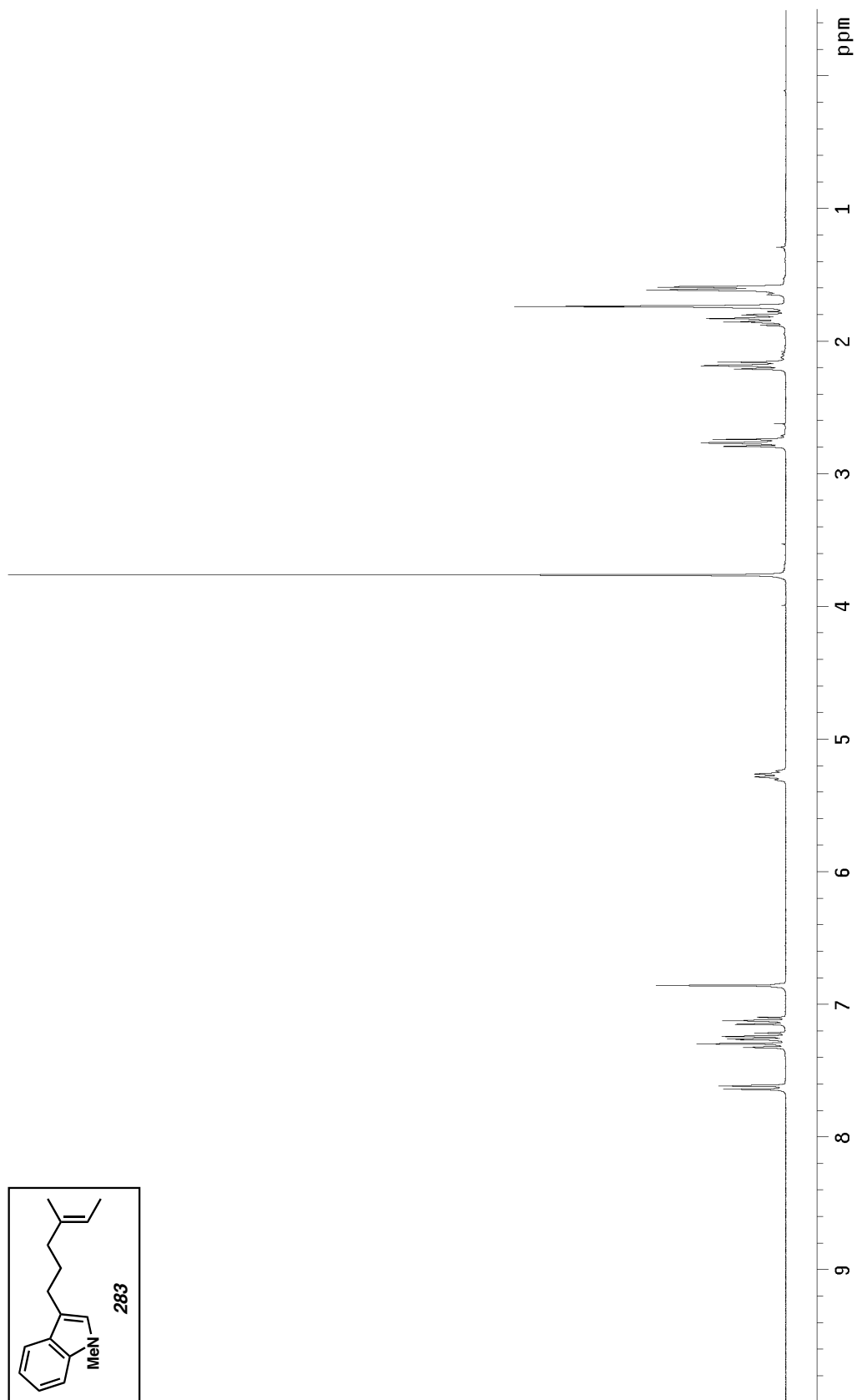
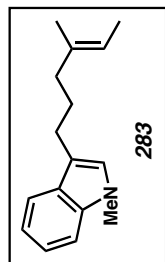


Figure A2.28 ^1H NMR (300 MHz, CDCl_3) of compound **283**.

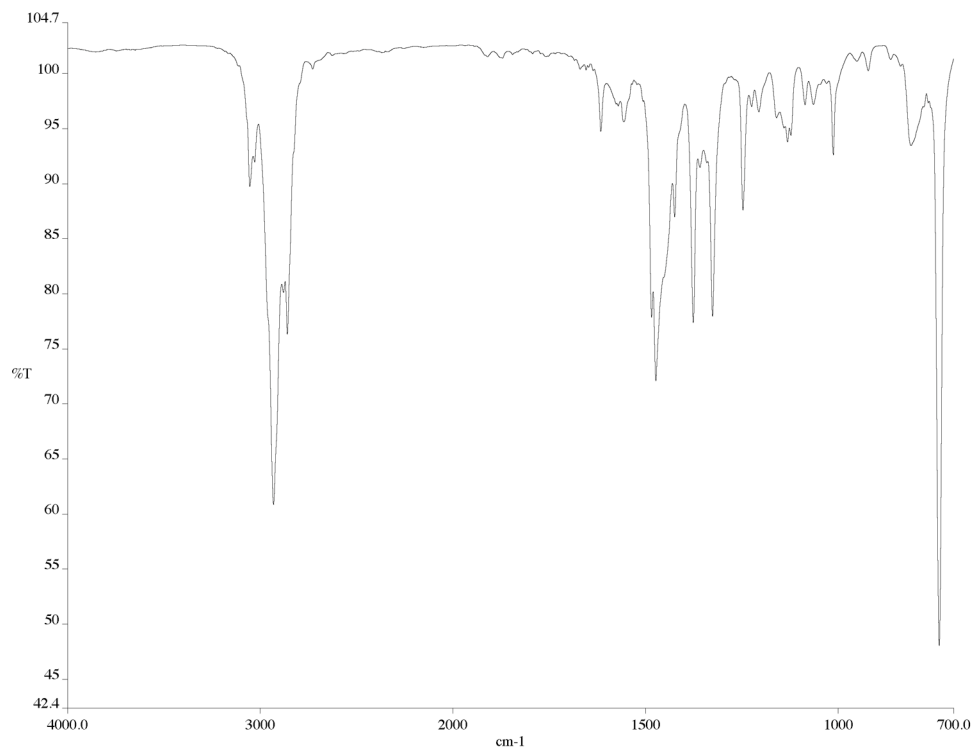


Figure A2.29 Infrared spectrum (thin film/NaCl) of compound **283**.

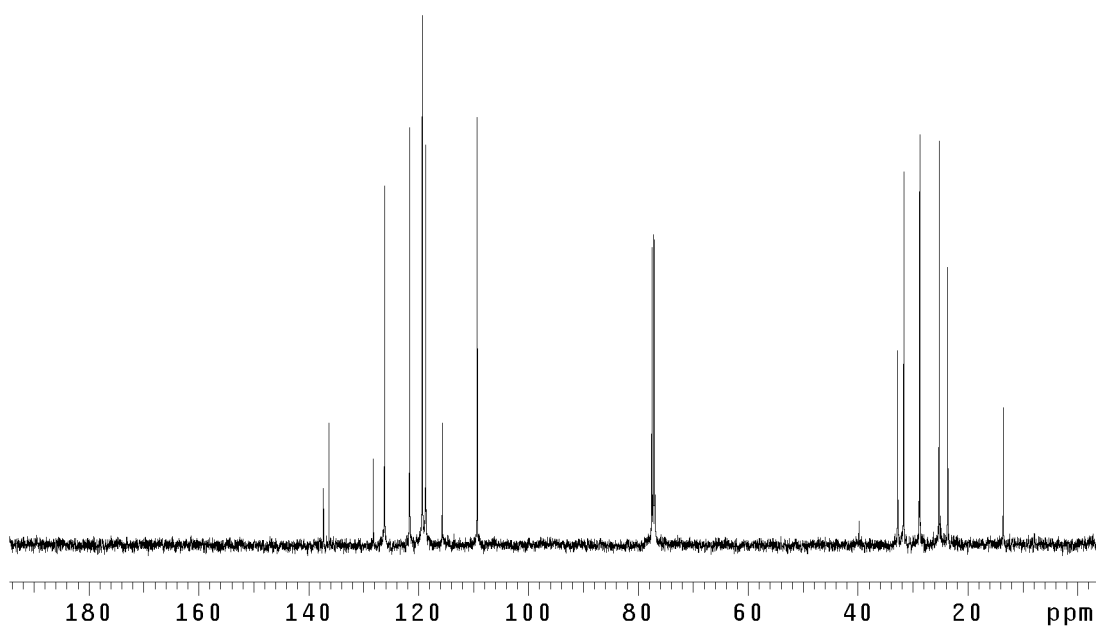


Figure A2.30 ¹³C NMR (125 MHz, CDCl₃) of compound **283**.

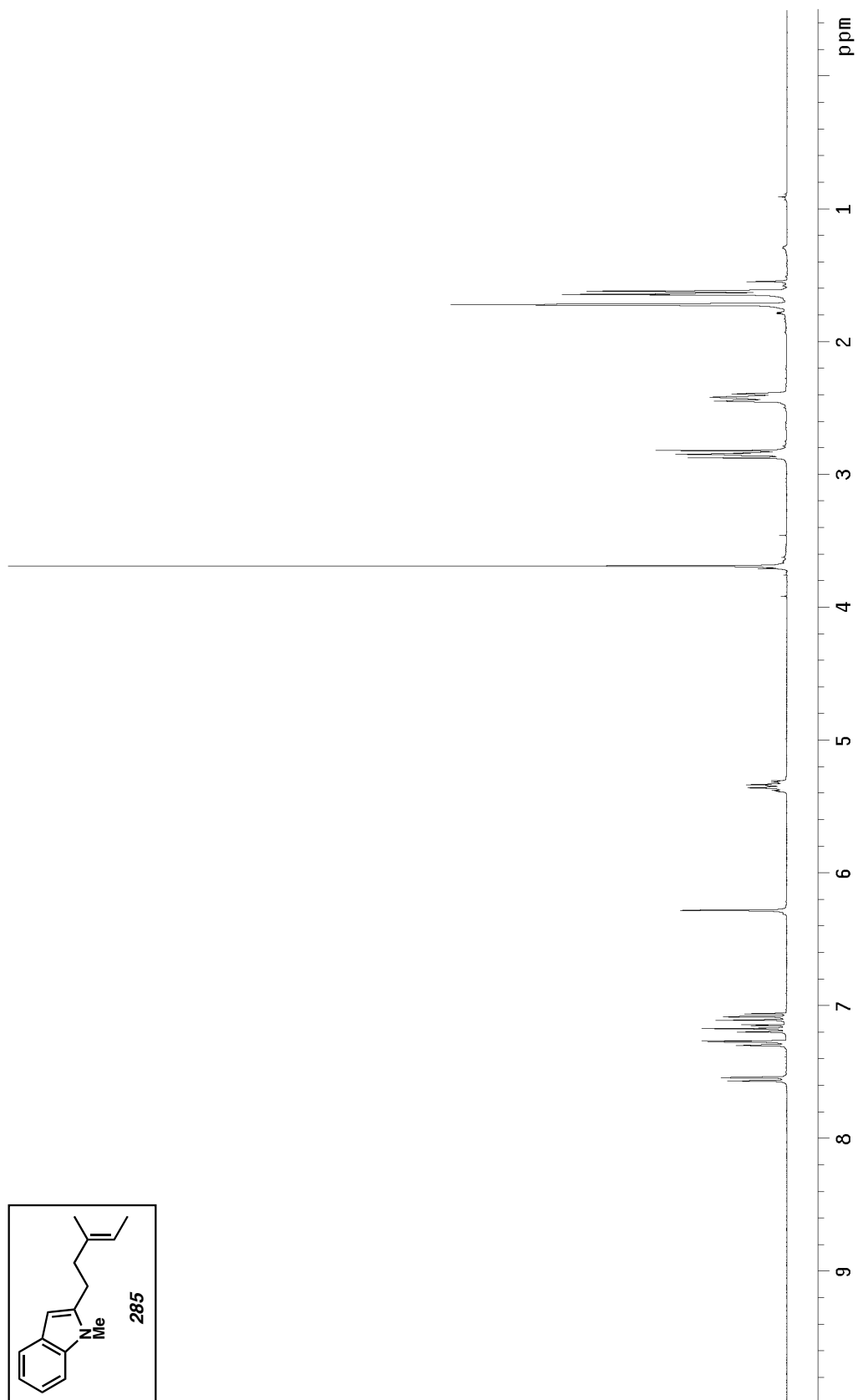
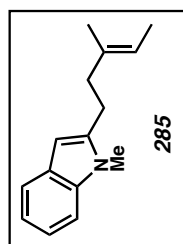


Figure A2.31 ^1H NMR (300 MHz, CDCl_3) of compound 285.

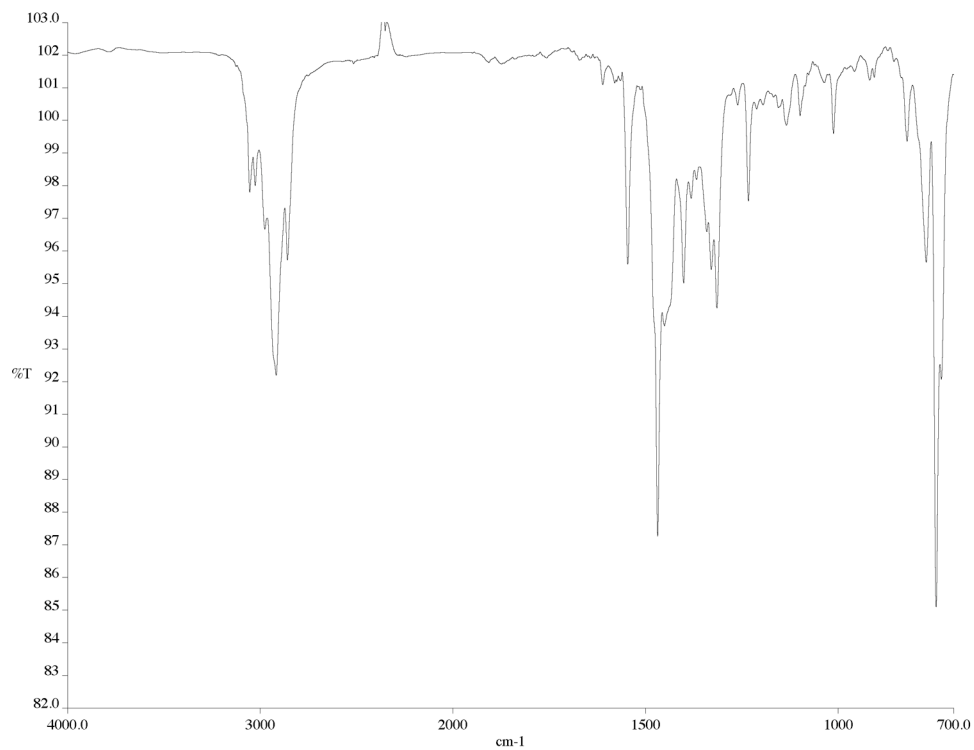


Figure A2.32 Infrared spectrum (thin film/NaCl) of compound **285**.

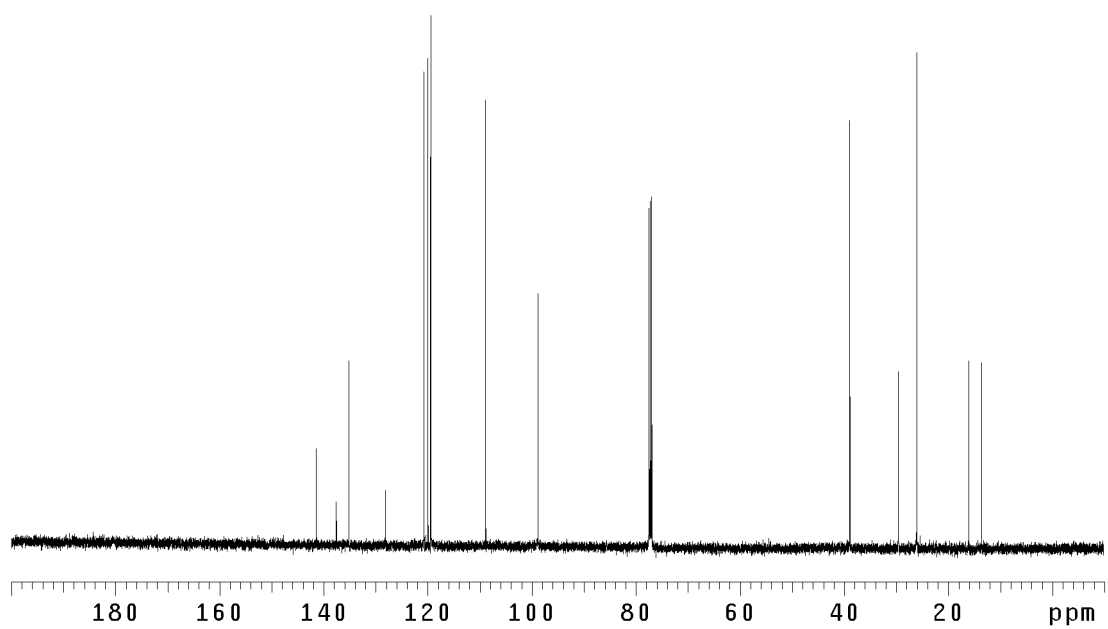


Figure A2.33 ¹³C NMR (125 MHz, CDCl₃) of compound **285**.

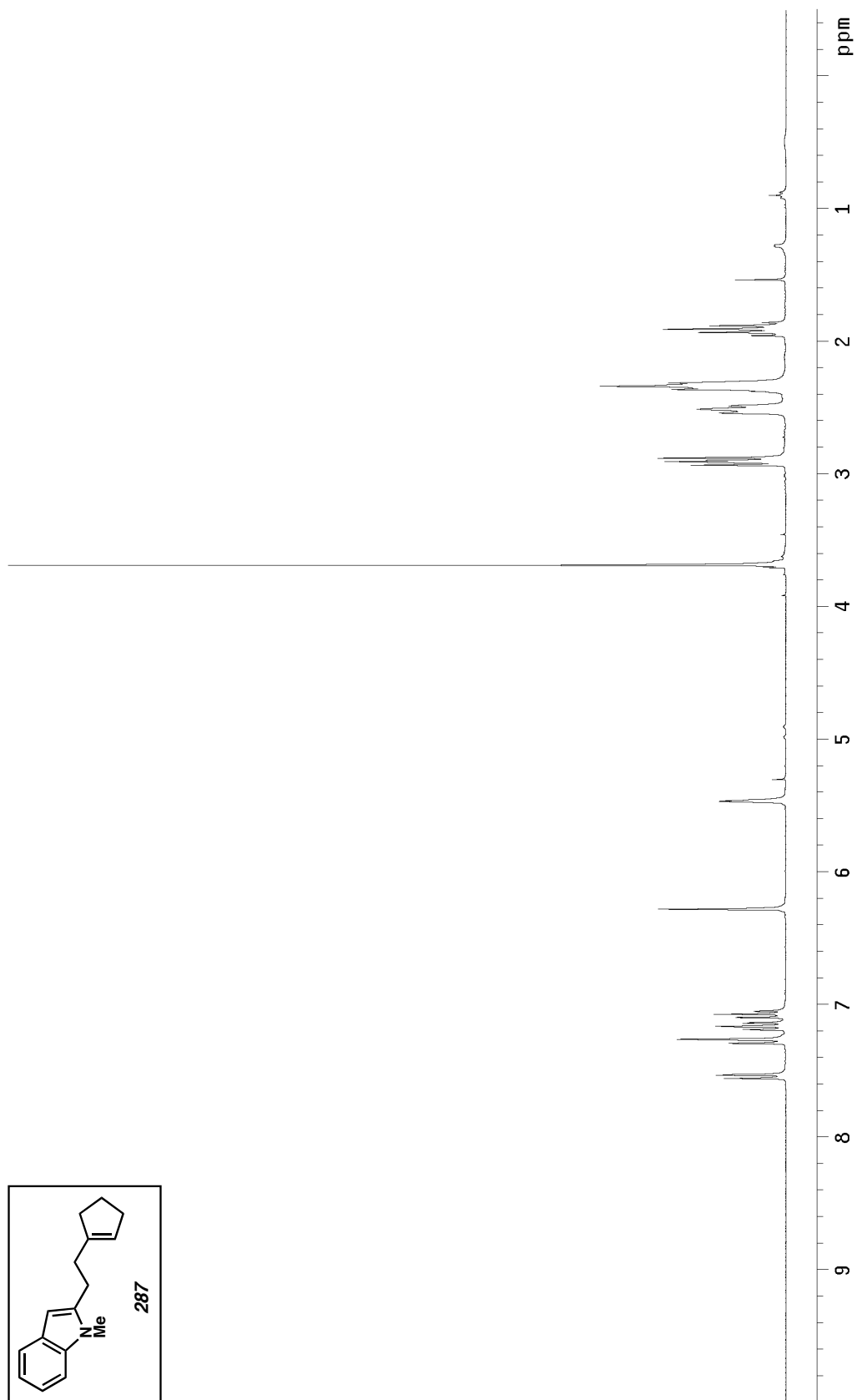
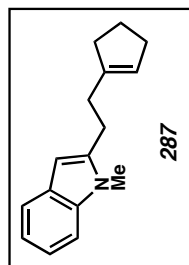


Figure A2.34 ^1H NMR (300 MHz, CDCl_3) of compound **287**.

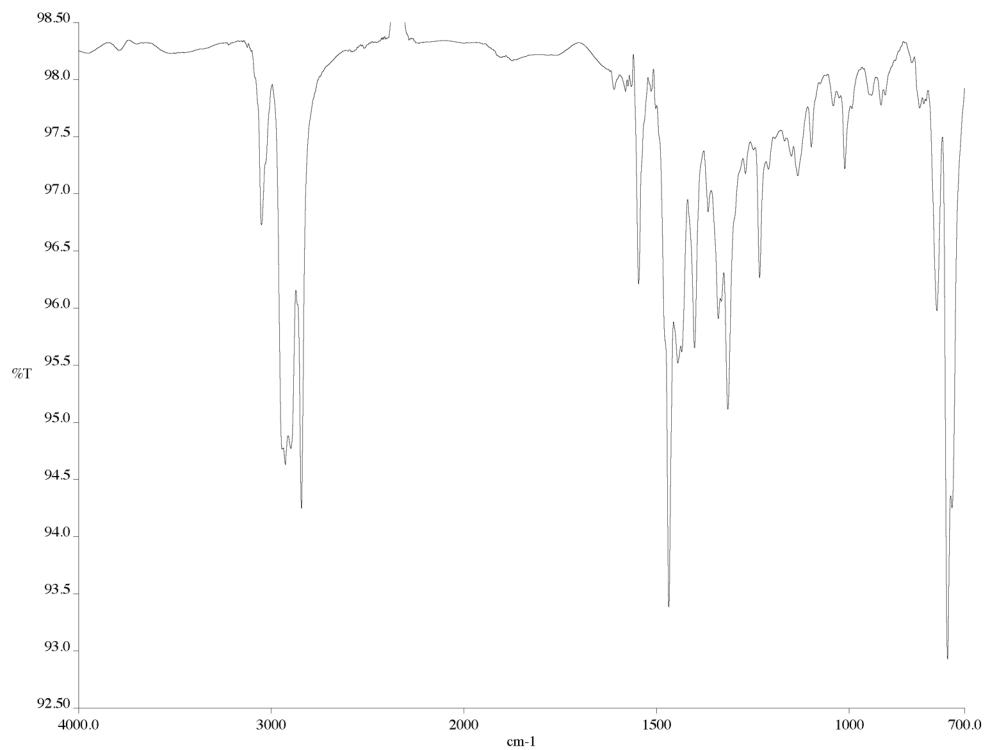


Figure A2.35 Infrared spectrum (thin film/NaCl) of compound **287**.

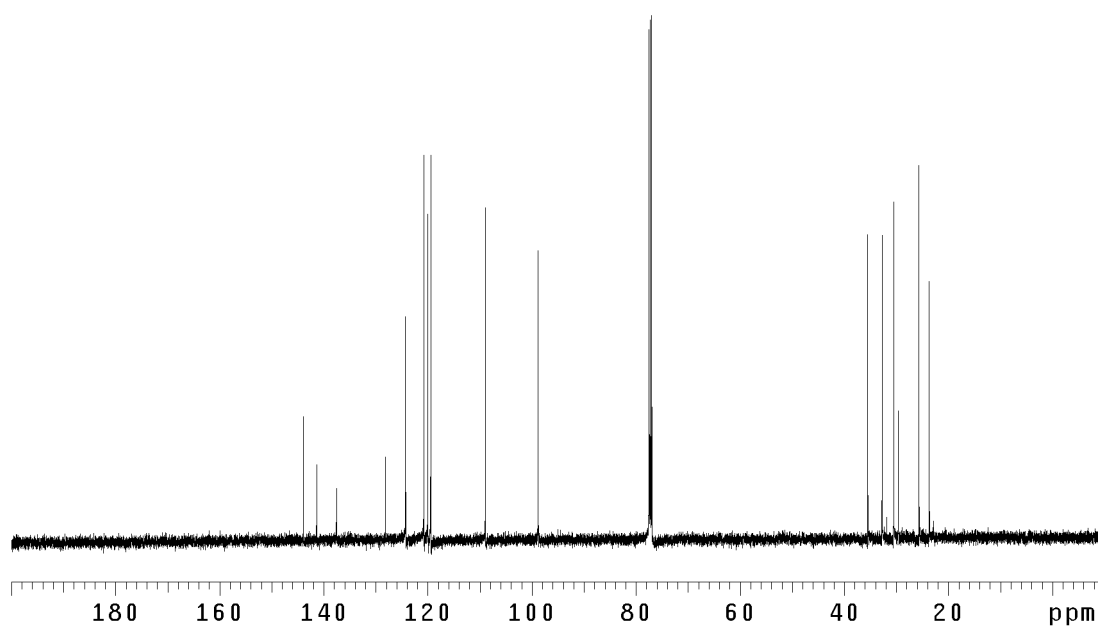


Figure A2.36 ¹³C NMR (125 MHz, CDCl₃) of compound **287**.

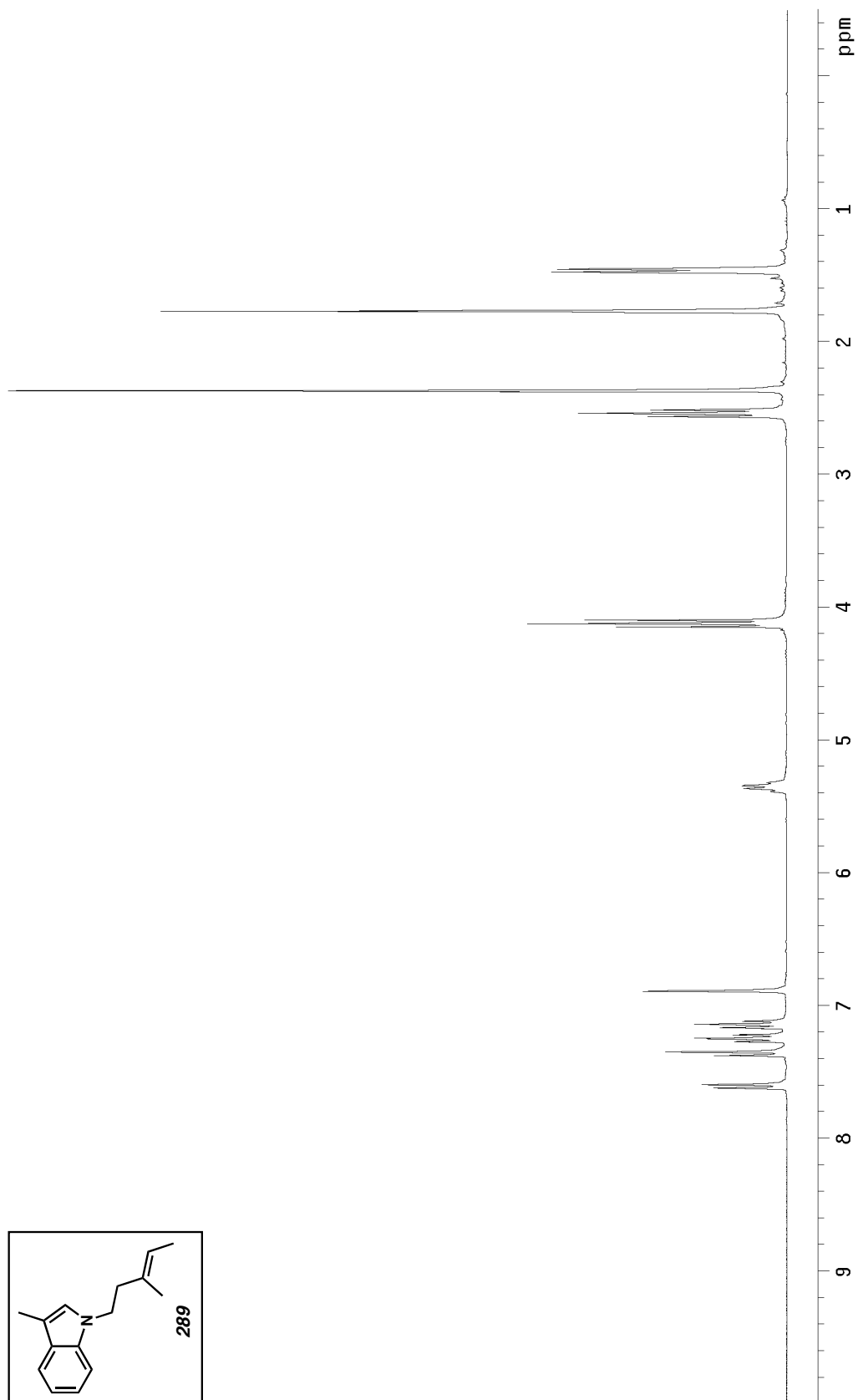
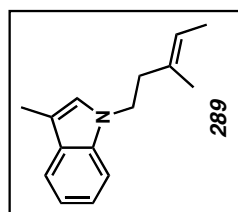


Figure A2.37 ¹H NMR (300 MHz, CDCl₃) of compound **289**.

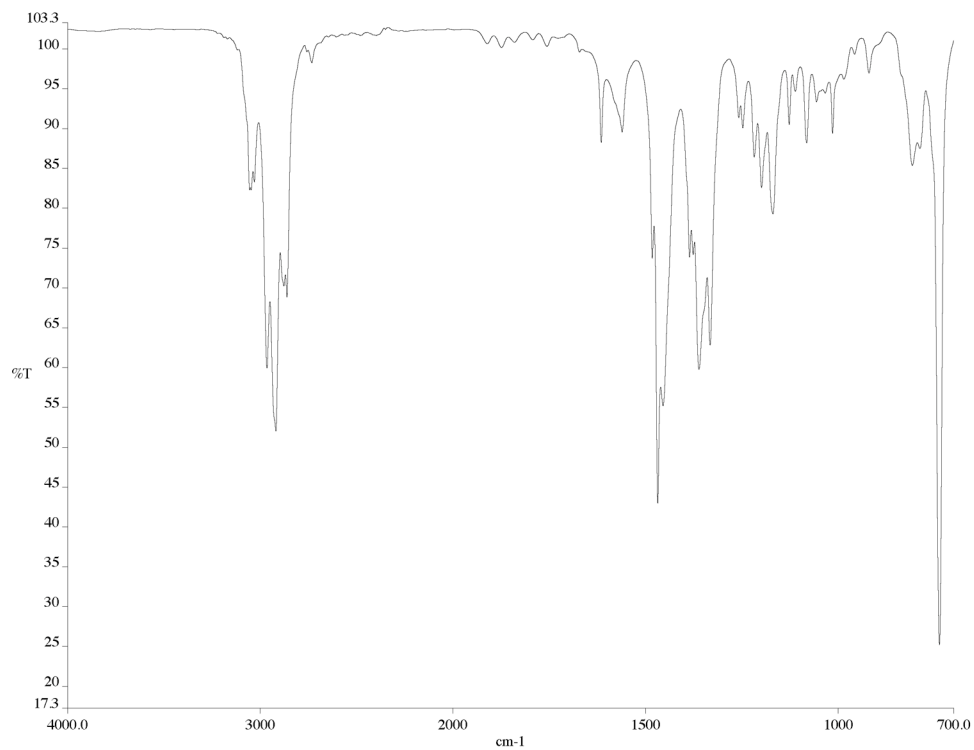


Figure A2.38 Infrared spectrum (thin film/NaCl) of compound **289**.

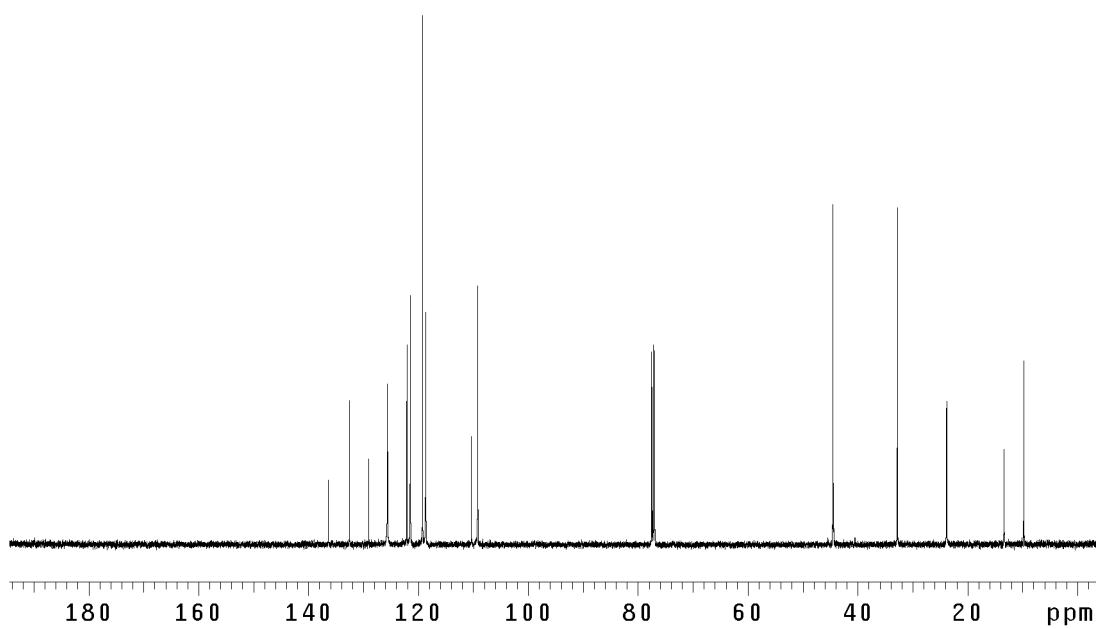


Figure A2.39 ¹³C NMR (125 MHz, CDCl₃) of compound **289**.

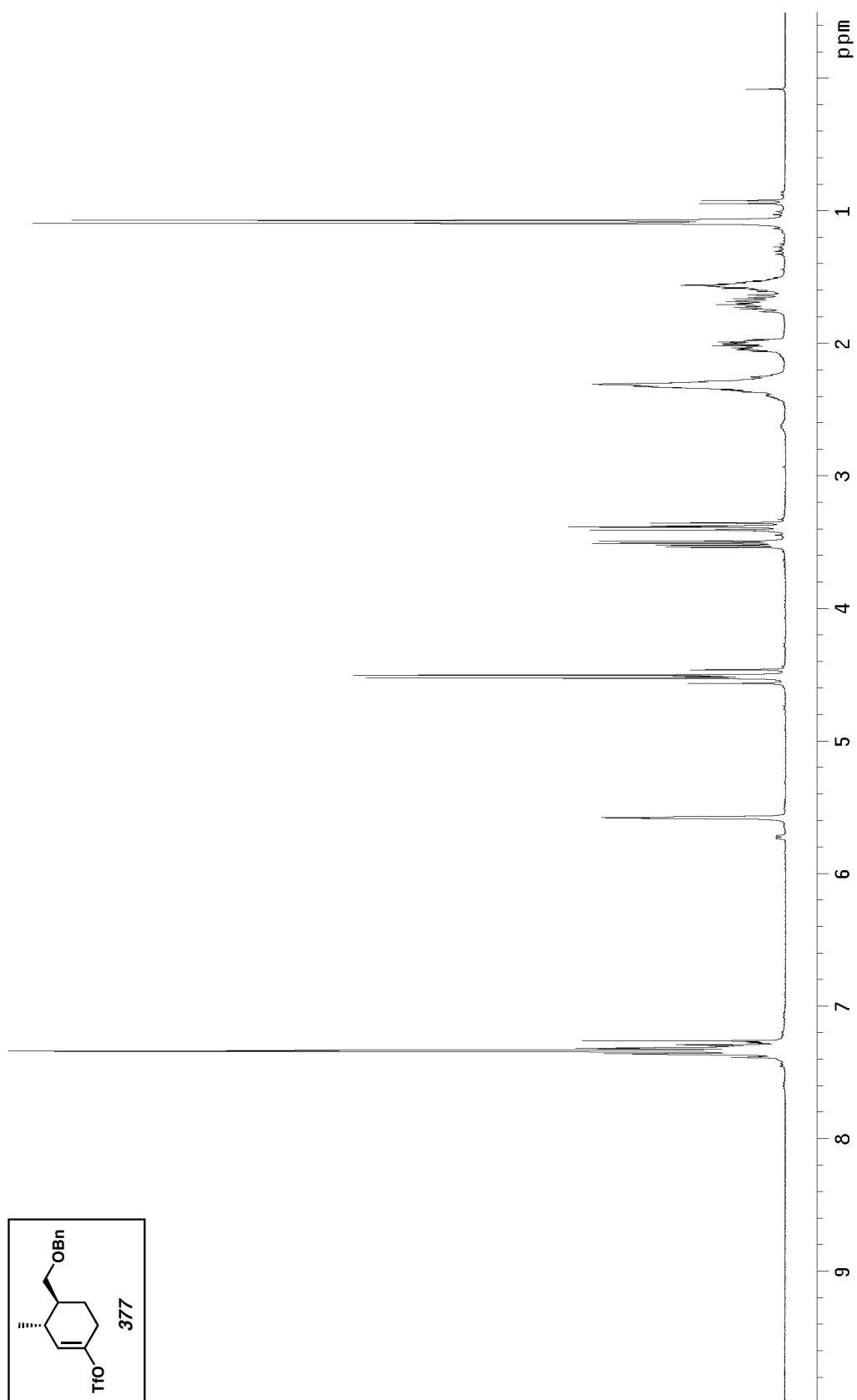


Figure A2.40 ^1H NMR (300 MHz, CDCl_3) of compound **377**.

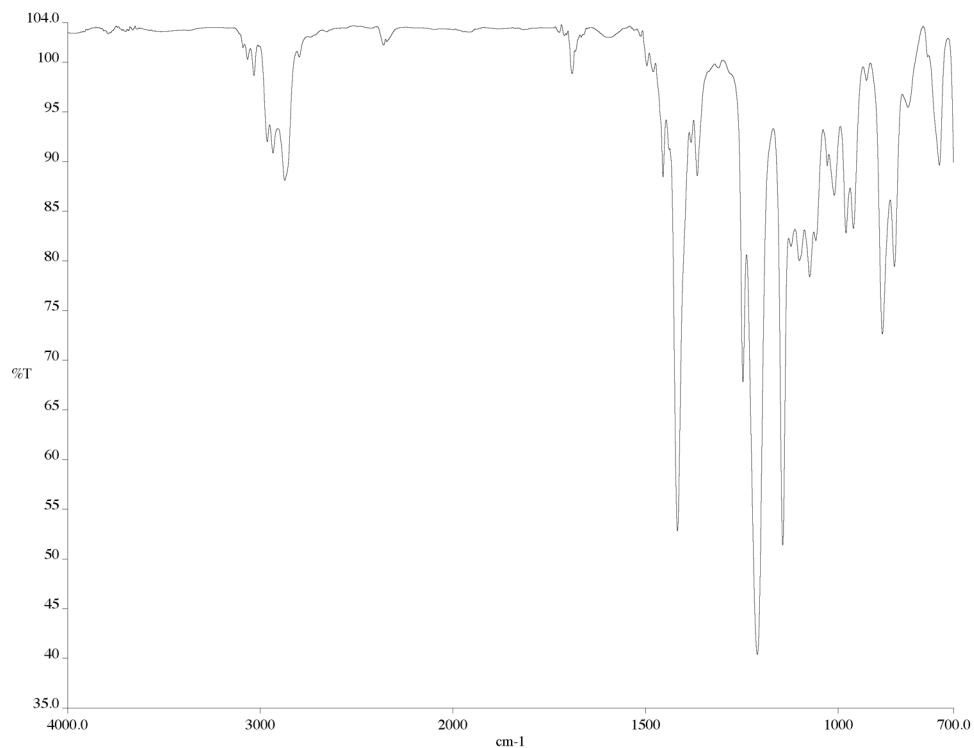


Figure A2.41 Infrared spectrum (thin film/NaCl) of compound **377**.

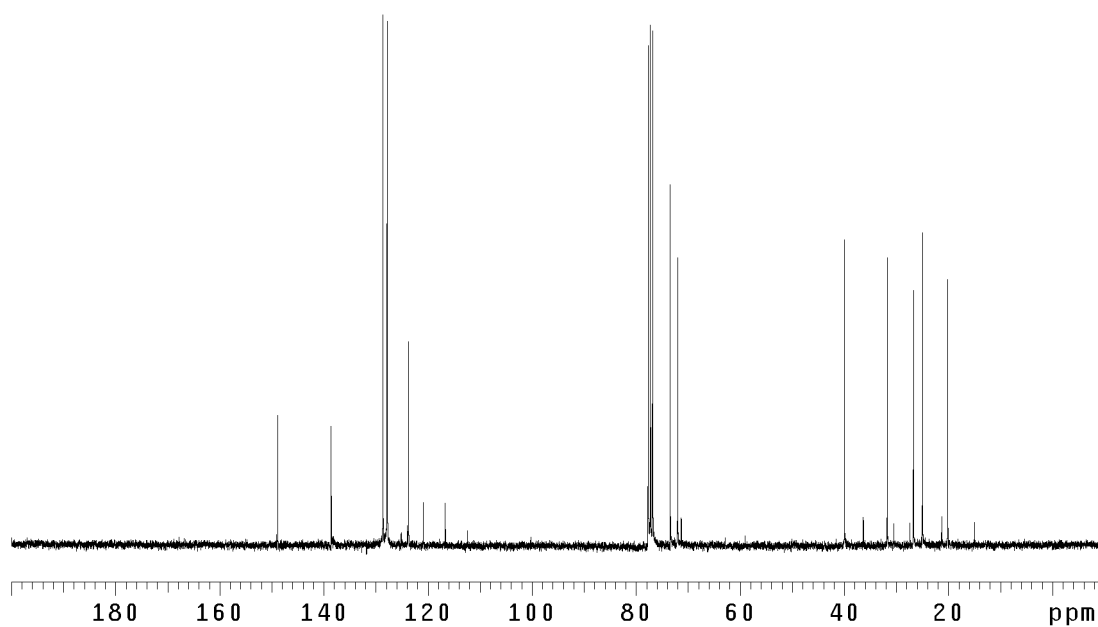


Figure A2.42 ¹³C NMR (75 MHz, CDCl₃) of compound **377**.

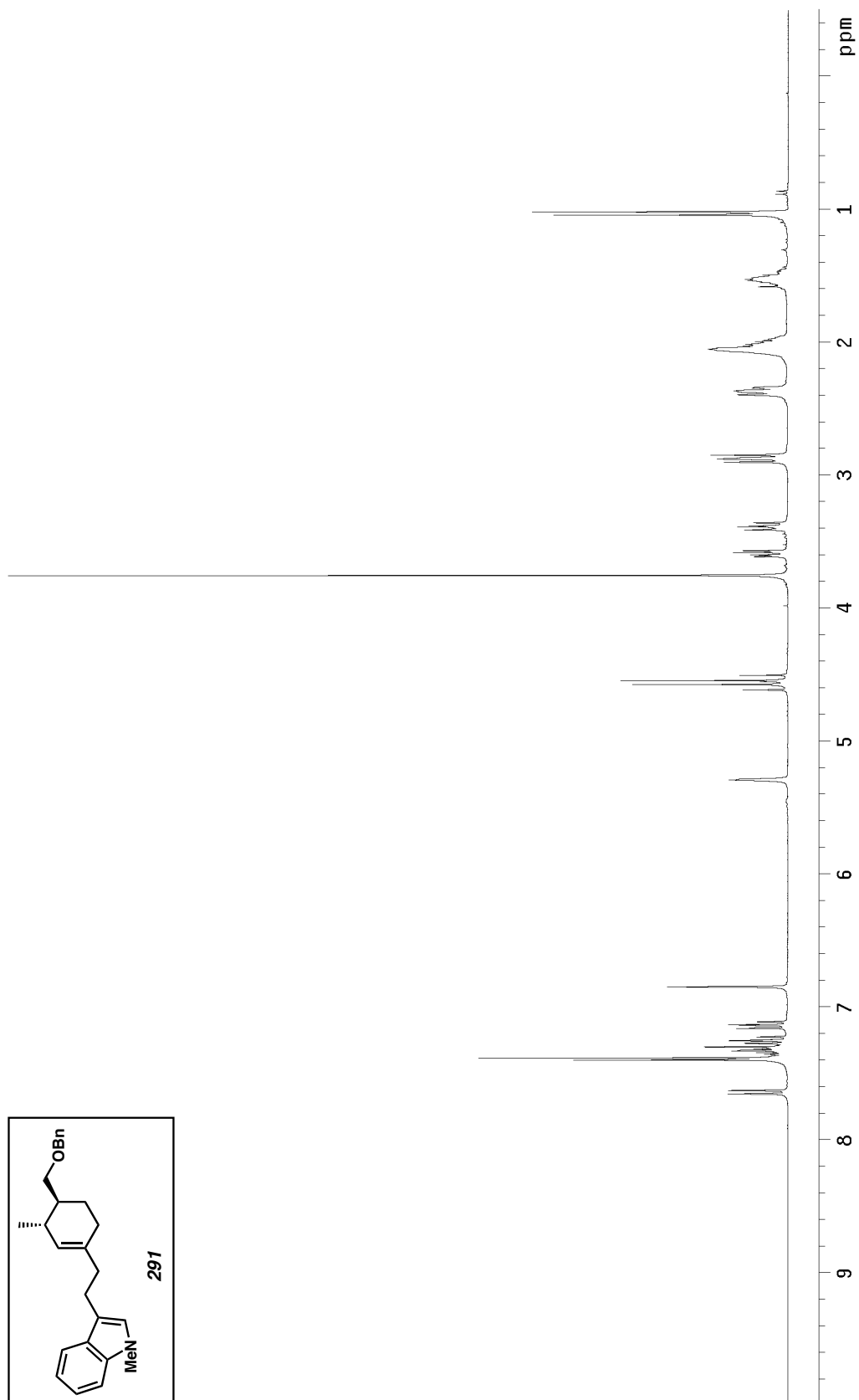
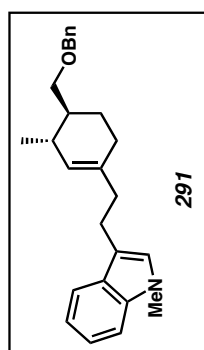


Figure A2.43 ^1H NMR (300 MHz, CDCl_3) of compound **291**.

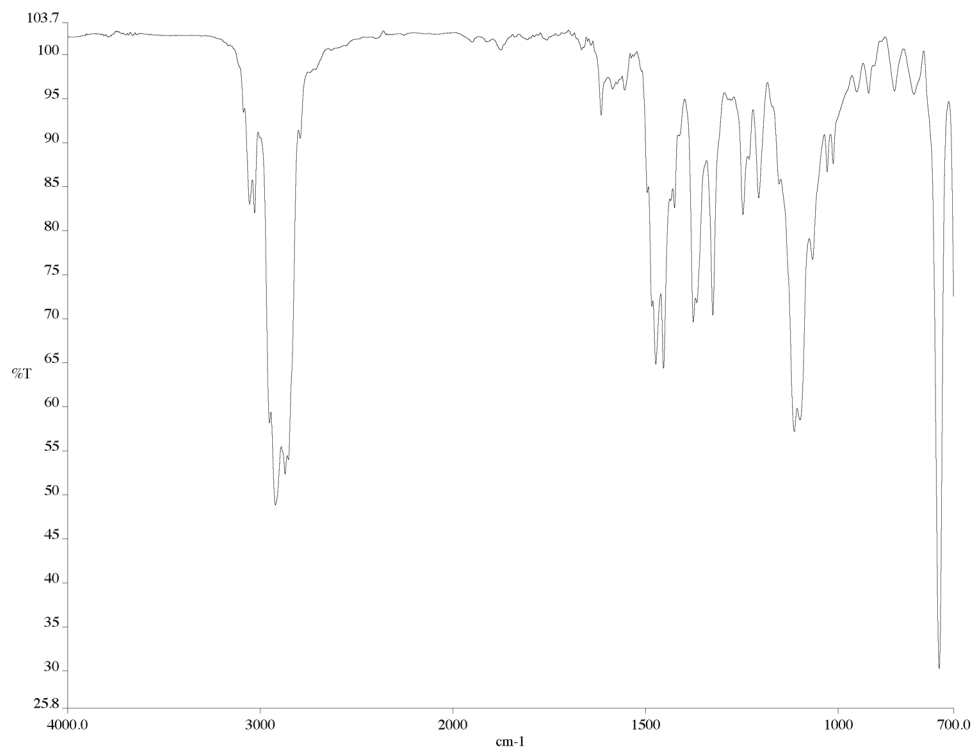


Figure A2.44 Infrared spectrum (thin film/NaCl) of compound **291**.

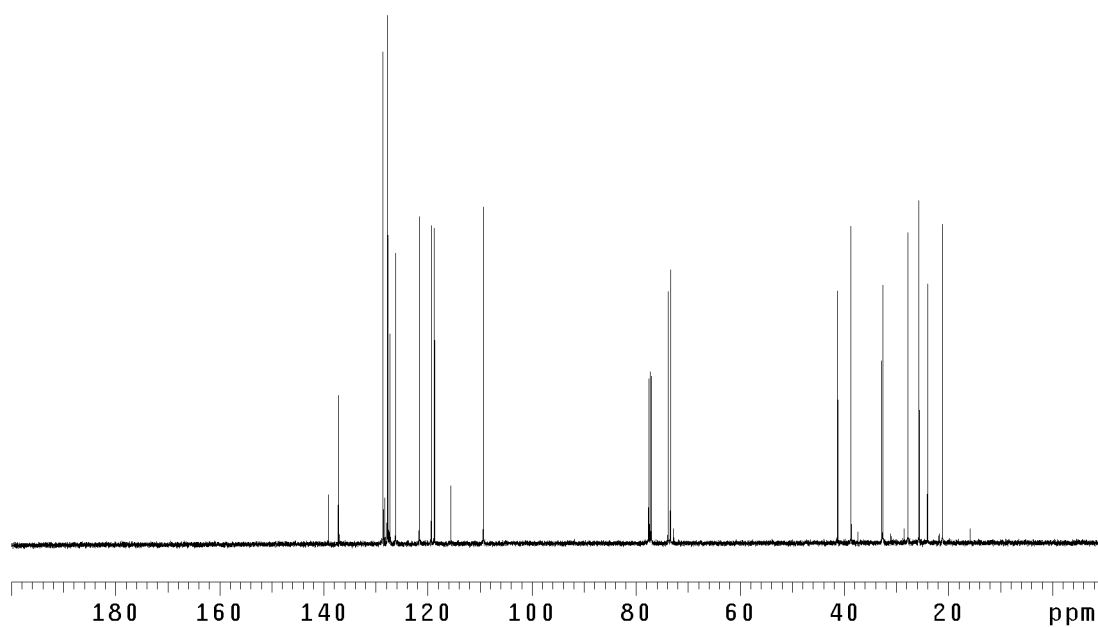


Figure A2.45 ¹³C NMR (125 MHz, CDCl₃) of compound **291**.

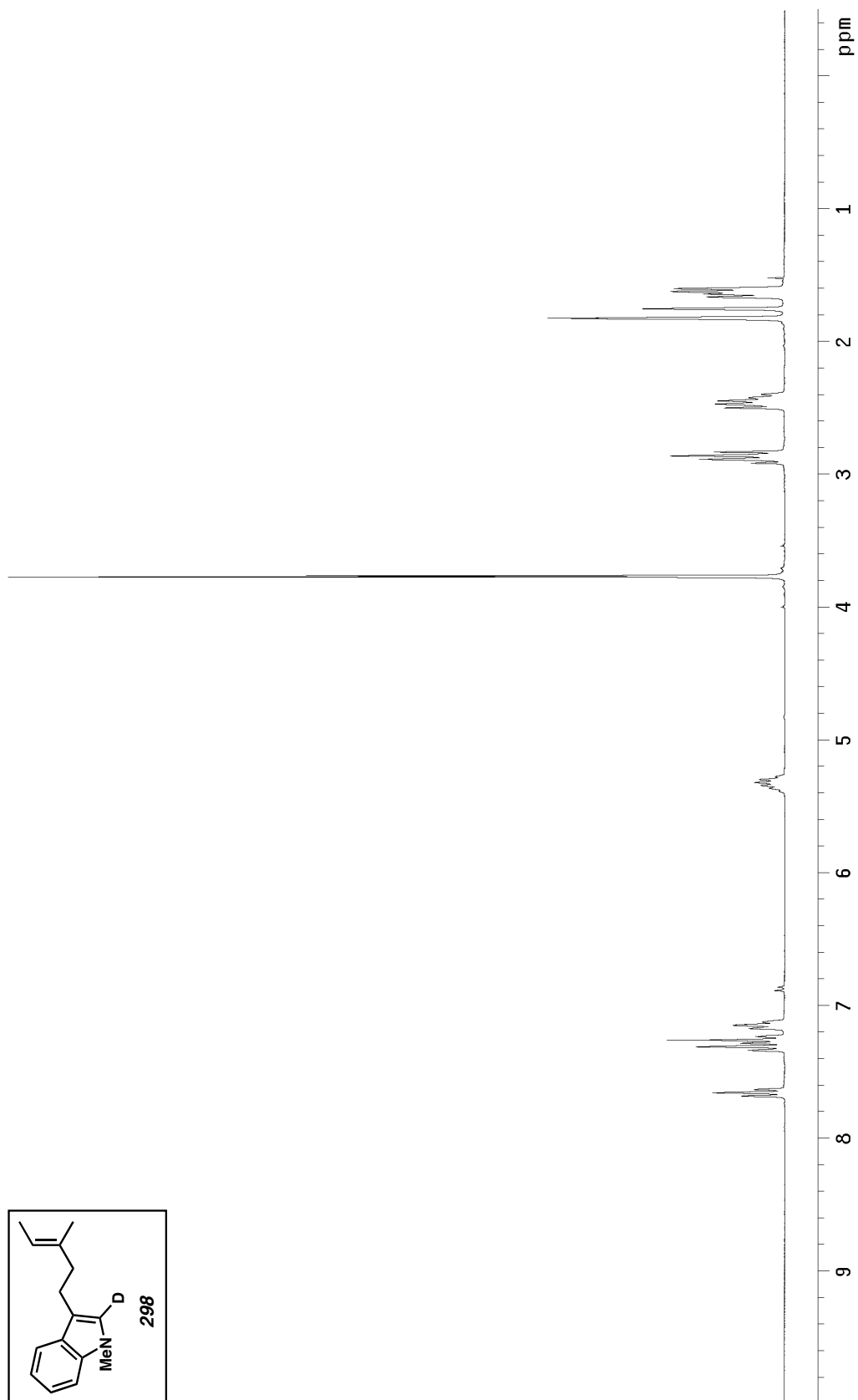
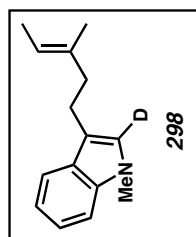


Figure A2.46 ^1H NMR (300 MHz, CDCl_3) of compound **298**.

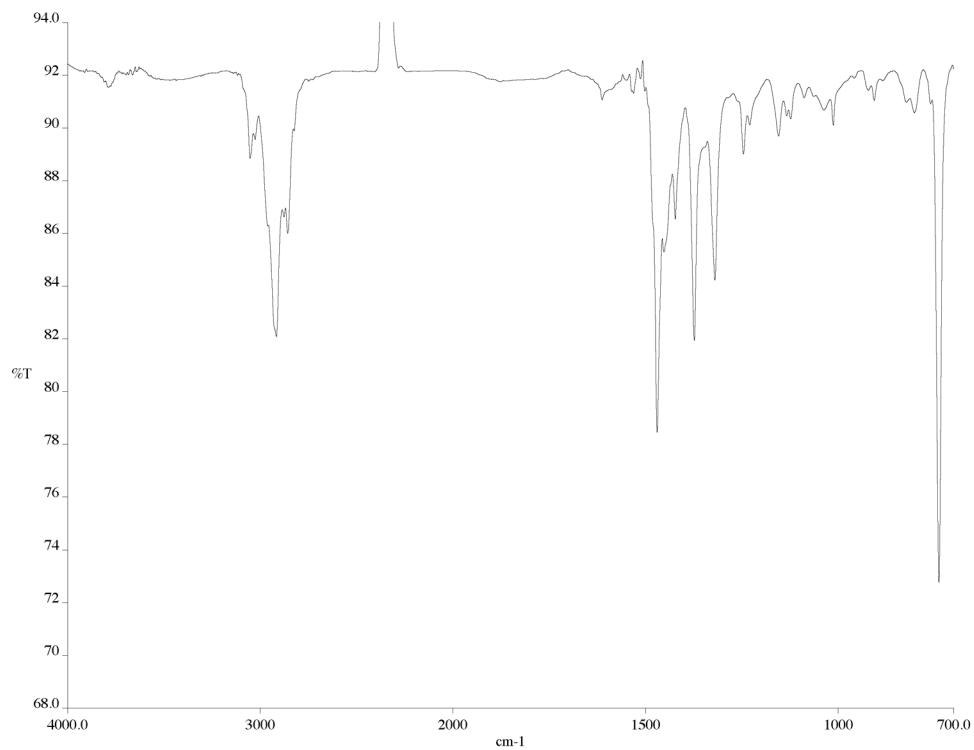


Figure A2.47 Infrared spectrum (thin film/NaCl) of compound **298**.

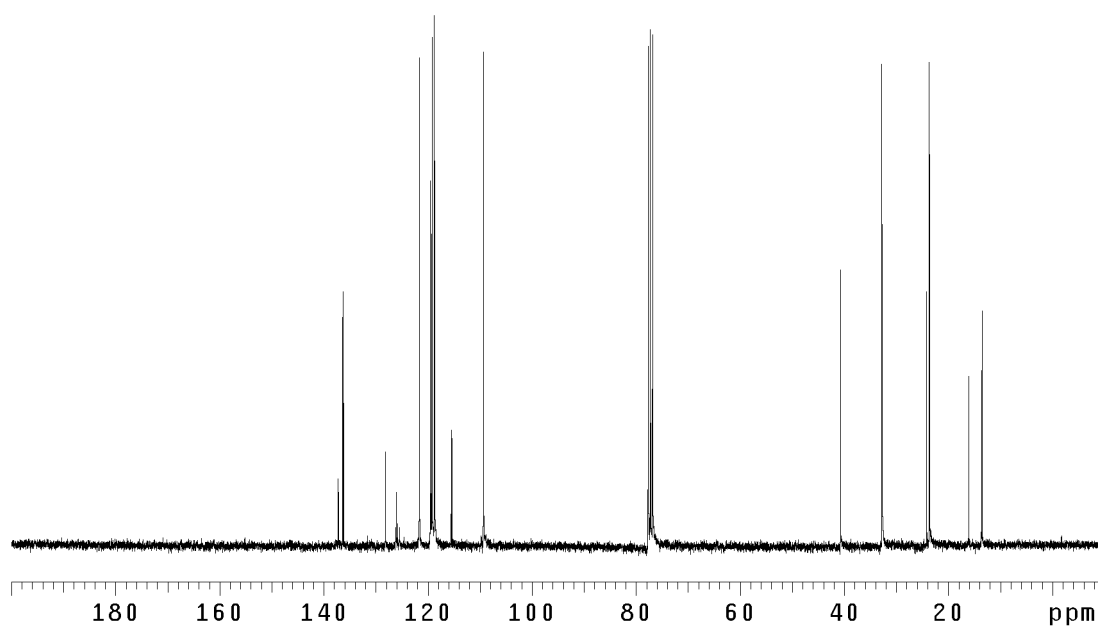


Figure A2.48 ¹³C NMR (75 MHz, CDCl₃) of compound **298**.

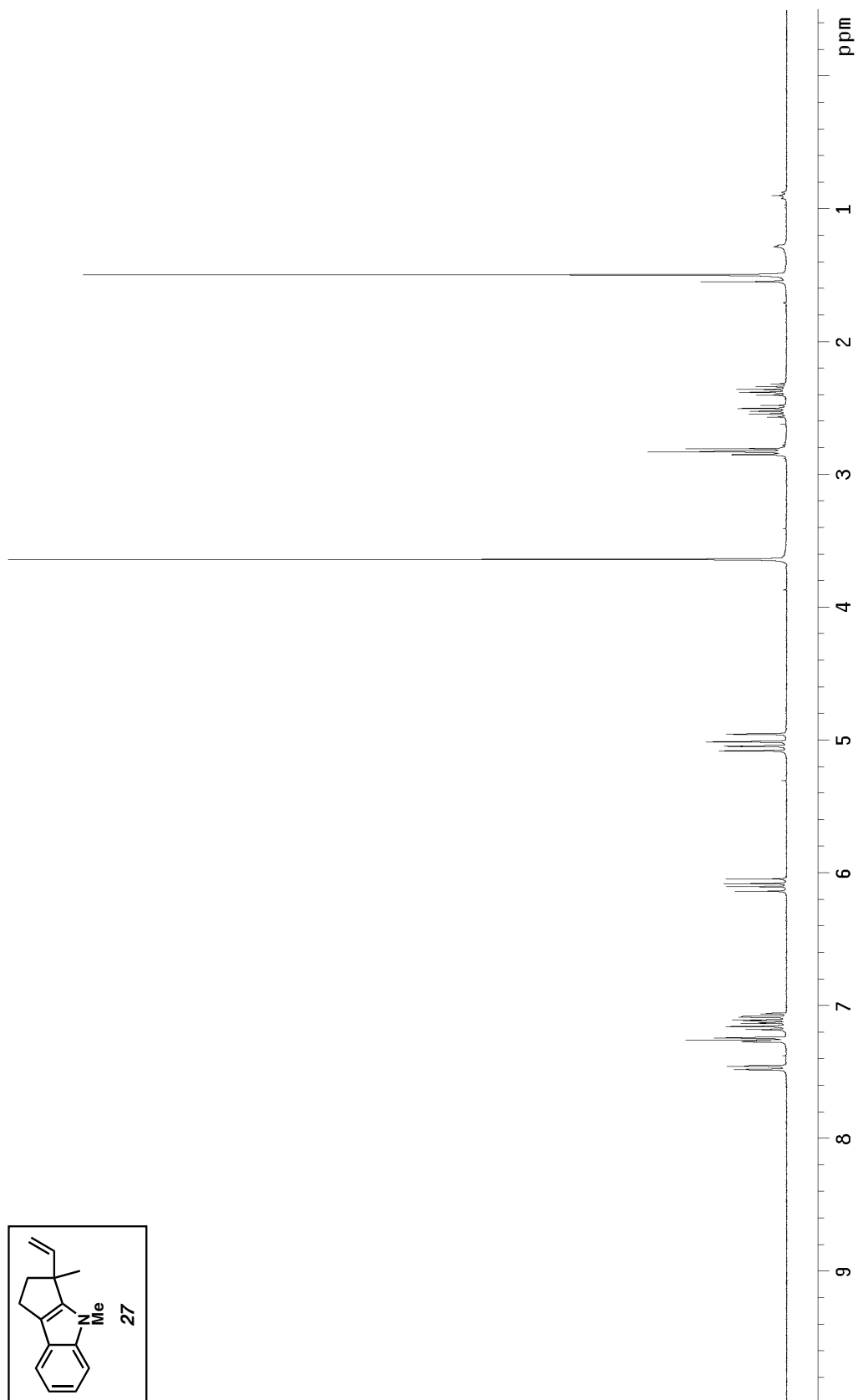
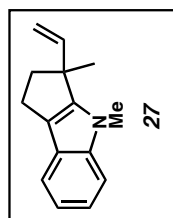


Figure A2.49 ^1H NMR (300 MHz, CDCl_3) of compound **27**.

Figure A2.51 ^{13}C NMR (125 MHz, CDCl_3) of compound **27**.

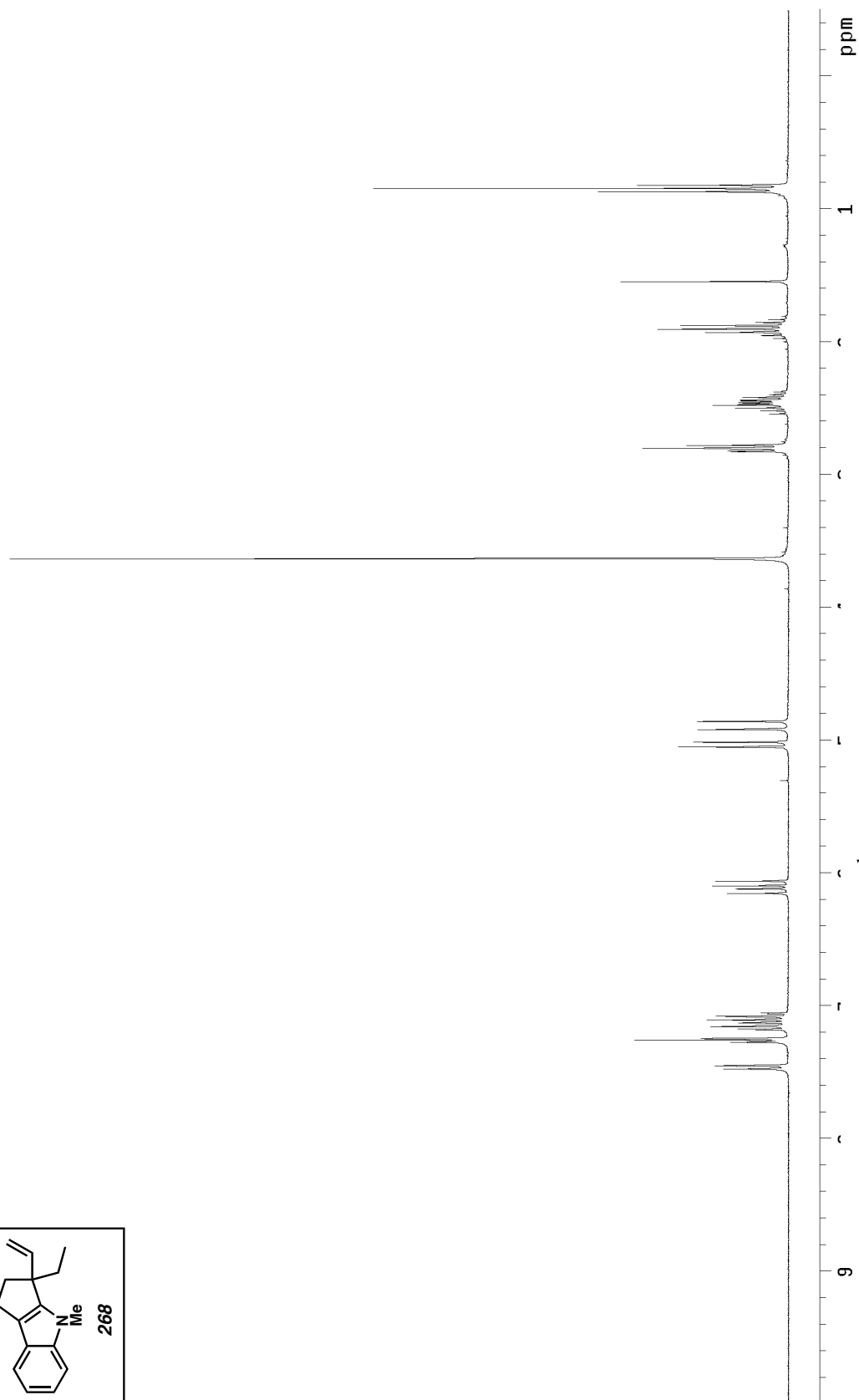
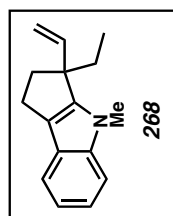


Figure A2.52 ^1H NMR (300 MHz, CDCl_3) of compound **268**.

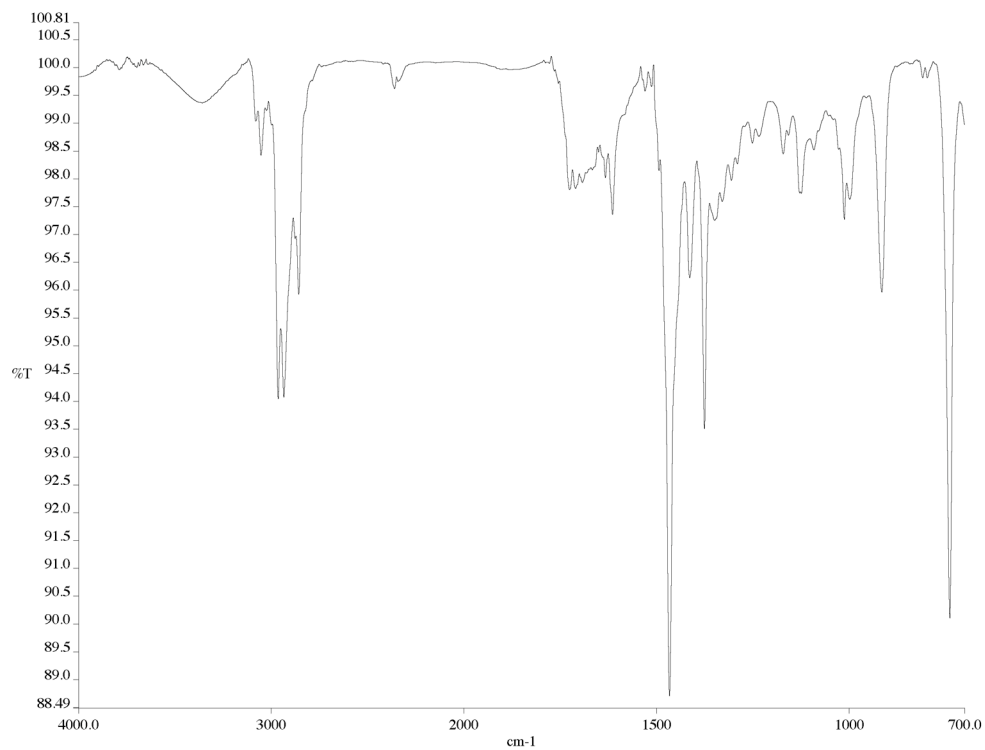


Figure A2.53 Infrared spectrum (thin film/NaCl) of compound **268**.

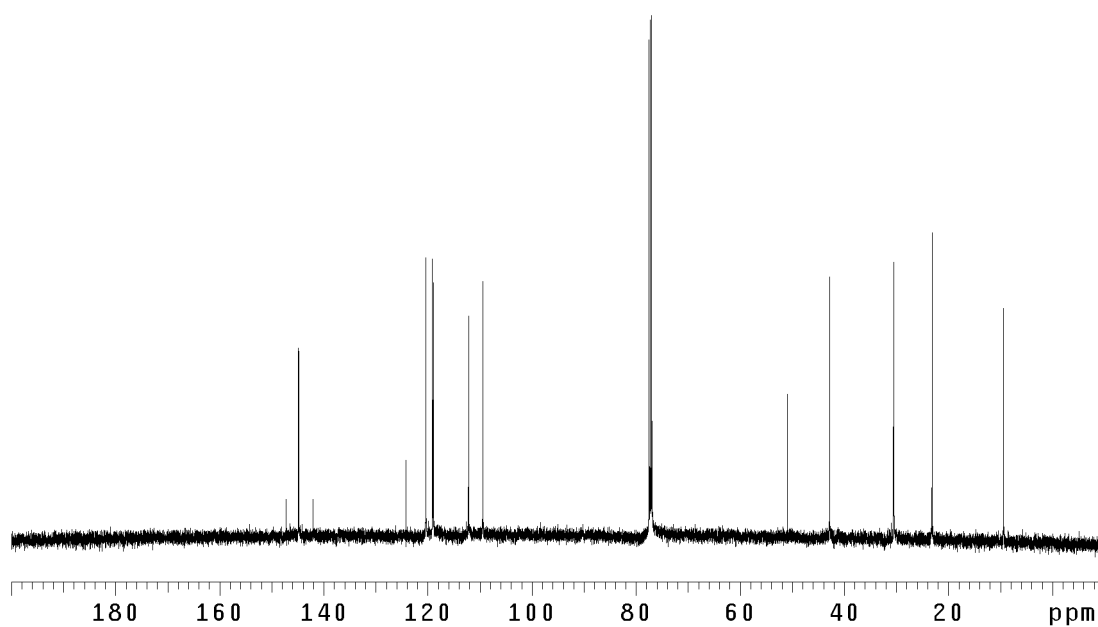


Figure A2.54 ¹³C NMR (125 MHz, CDCl₃) of compound **268**.

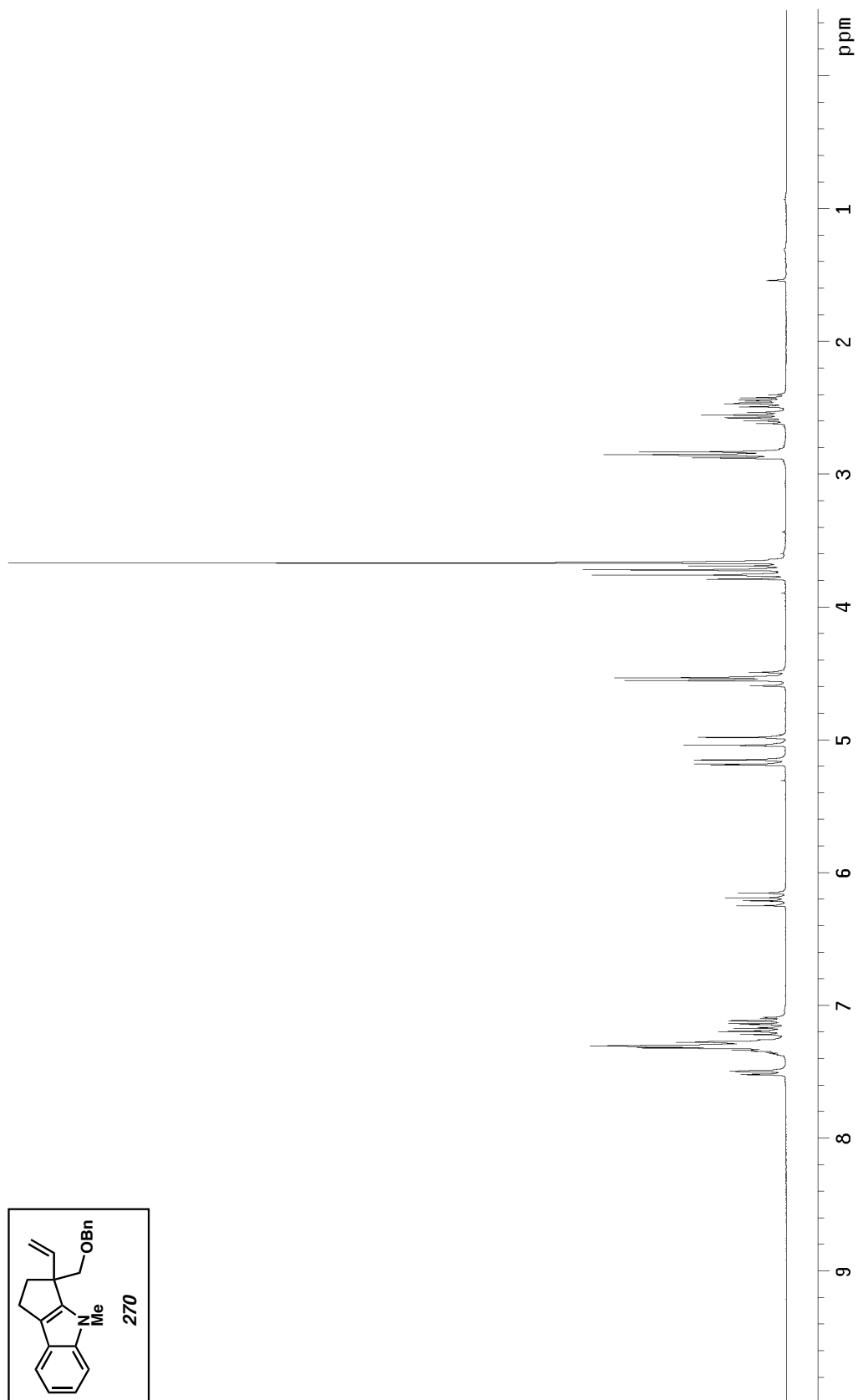
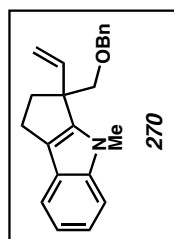


Figure A2.55 ^1H NMR (300 MHz, CDCl_3) of compound 270.

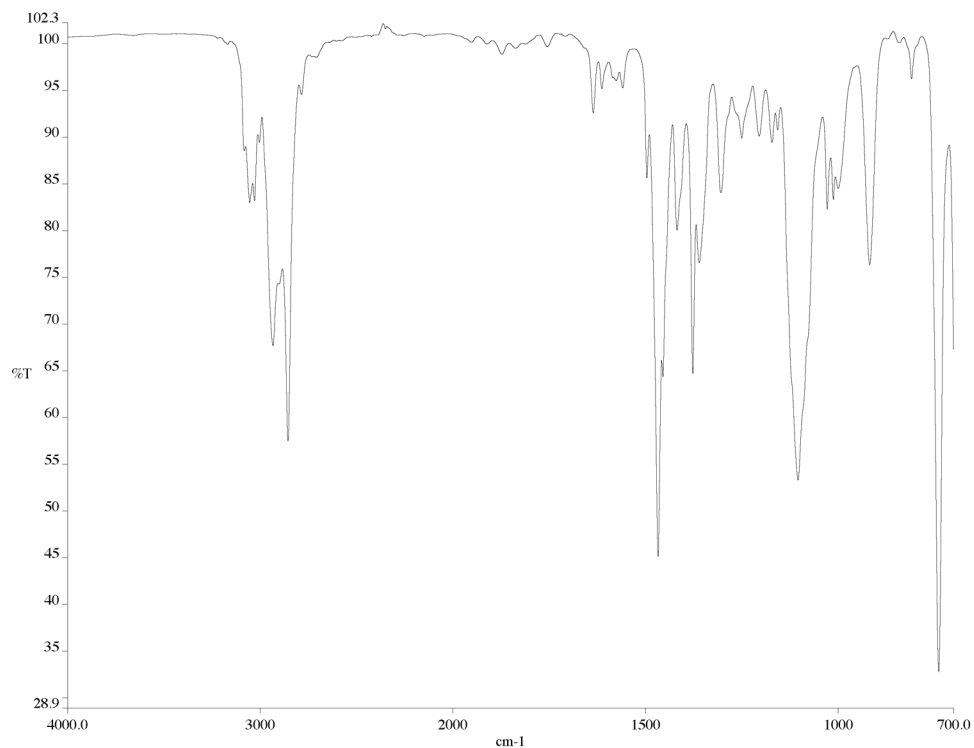


Figure A2.56 Infrared spectrum (thin film/NaCl) of compound **270**.

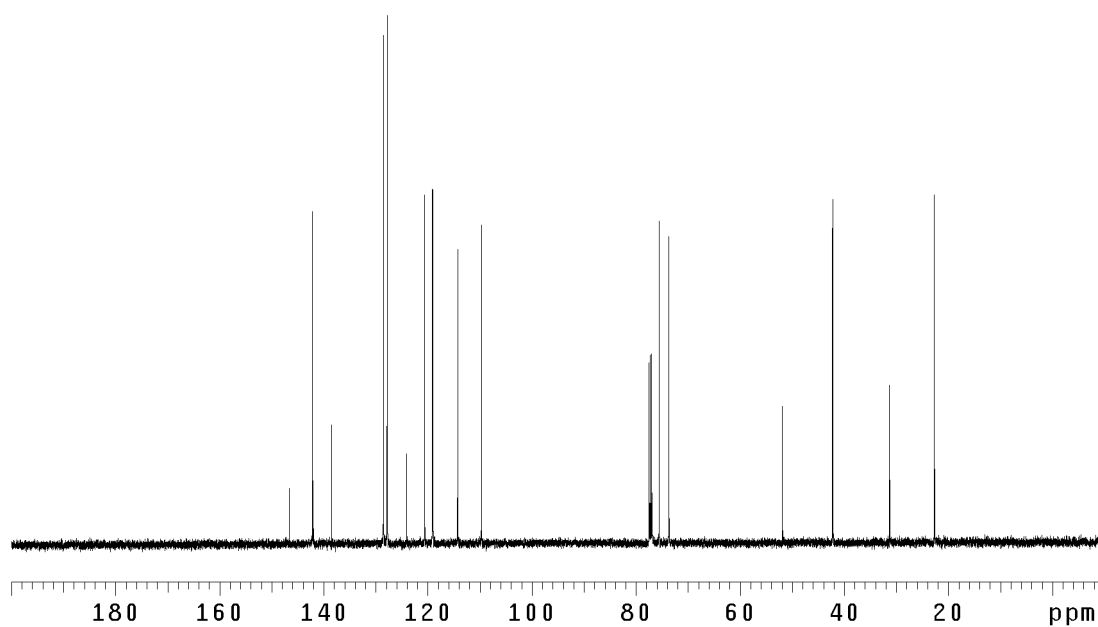


Figure A2.57 ¹³C NMR (125 MHz, CDCl₃) of compound **270**.

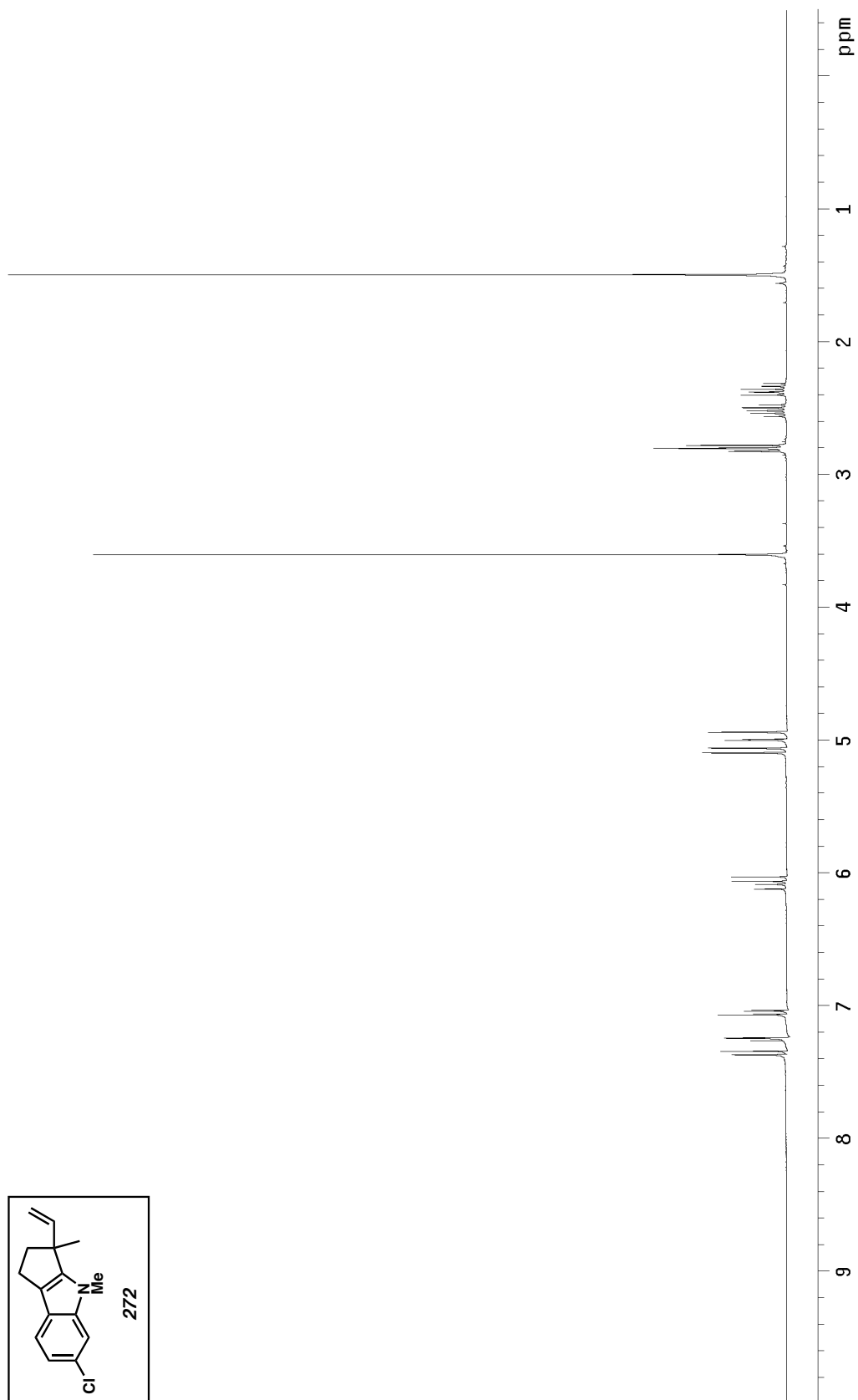
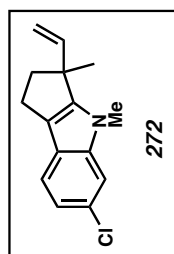


Figure A2.58 ^1H NMR (300 MHz, CDCl_3) of compound 272.

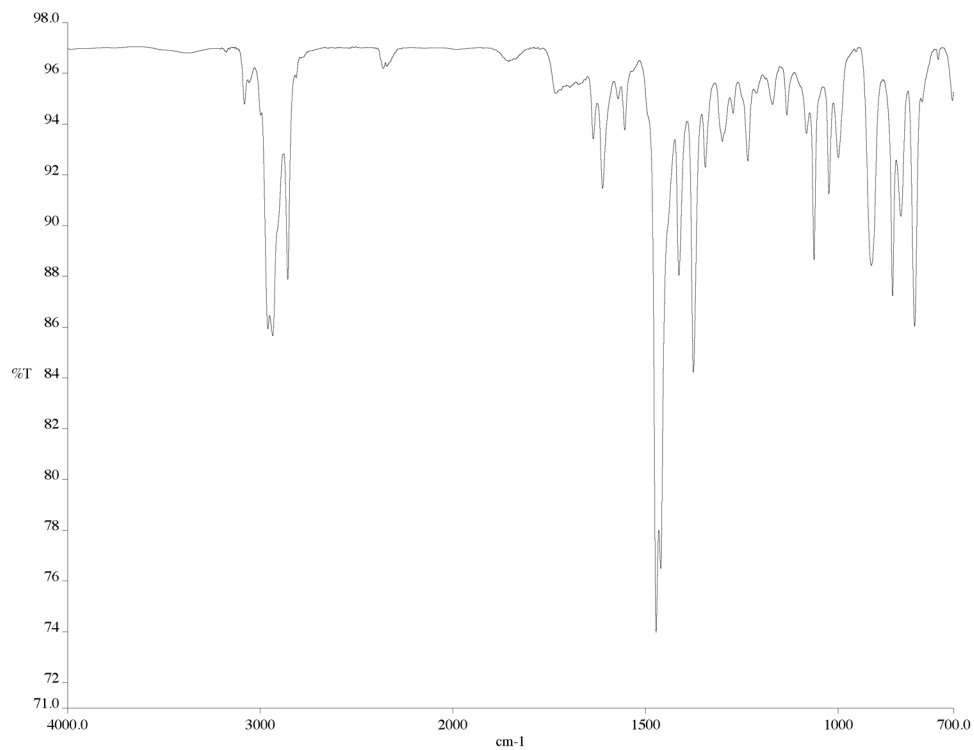


Figure A2.59 Infrared spectrum (thin film/NaCl) of compound **272**.

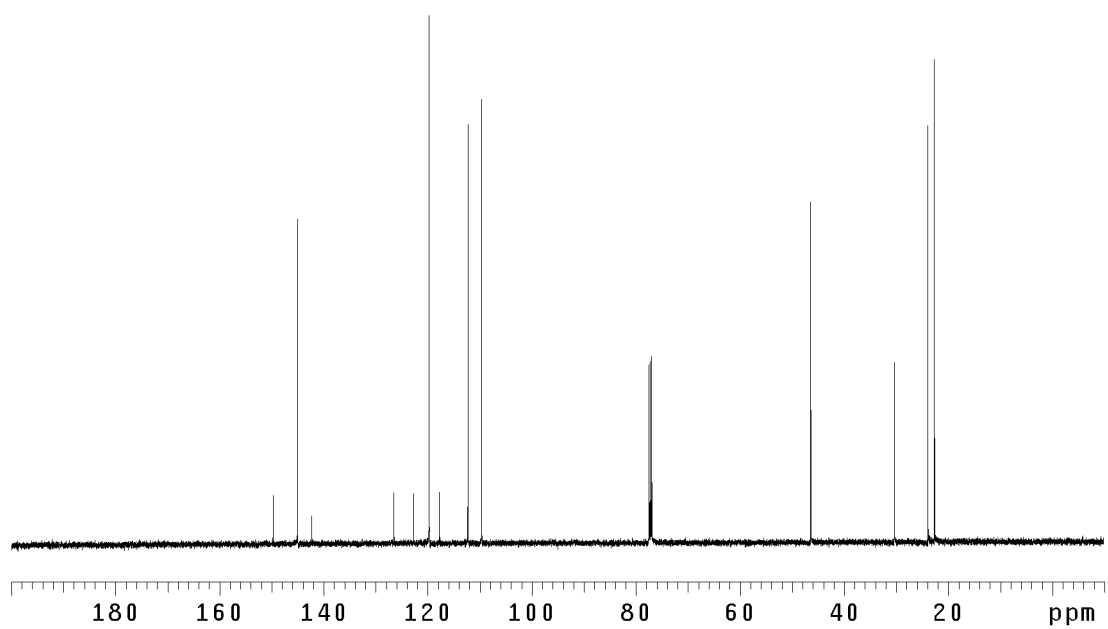


Figure A2.60 ¹³C NMR (125 MHz, CDCl₃) of compound **272**.

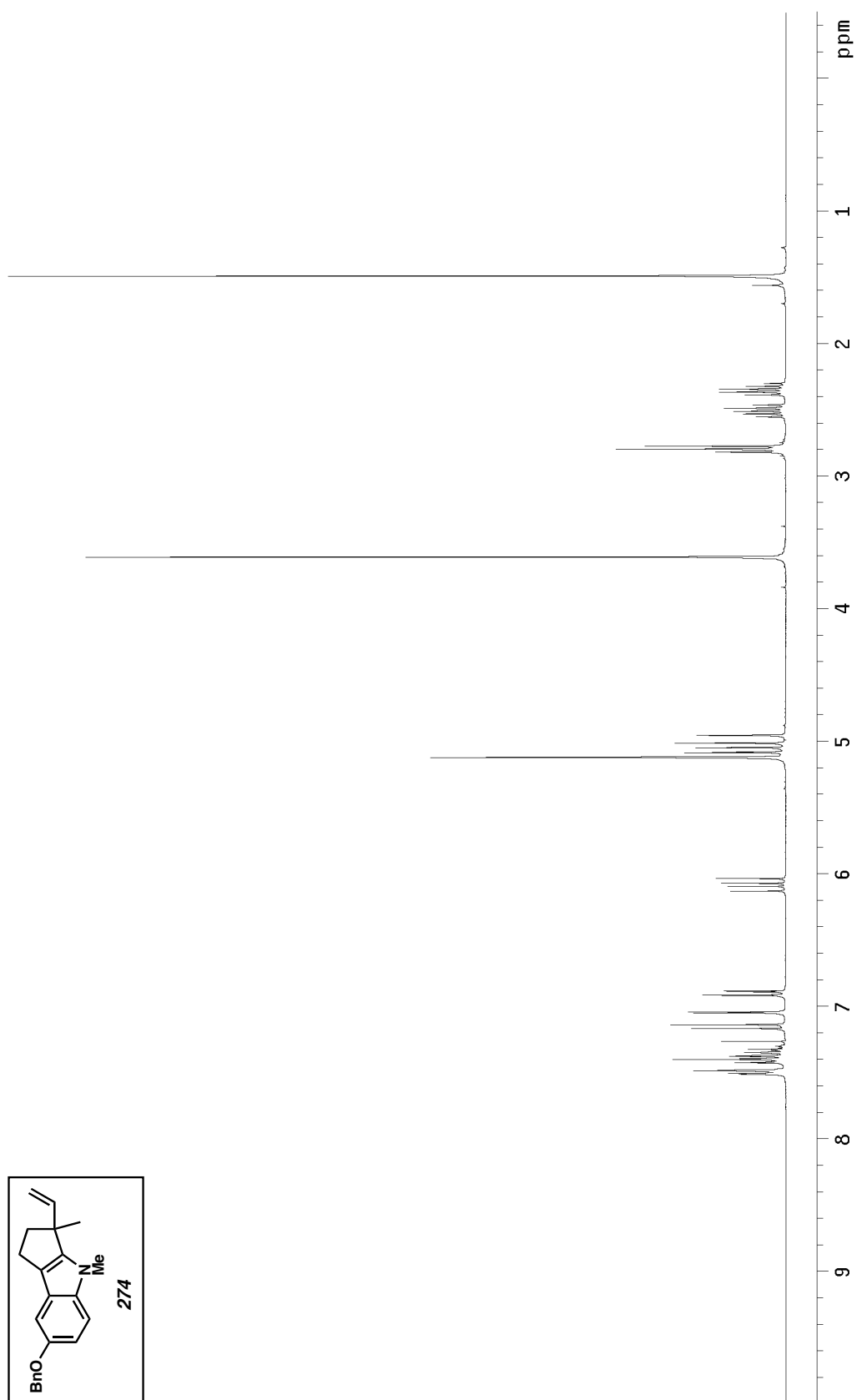


Figure A2.61 ¹H NMR (300 MHz, CDCl₃) of compound 274.

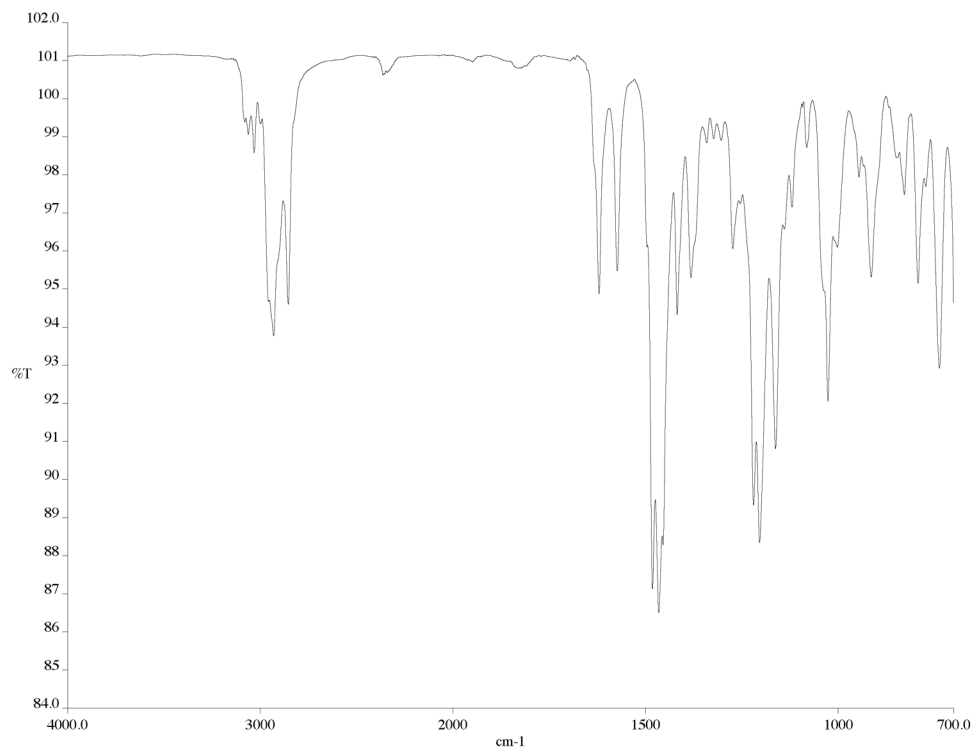


Figure A2.62 Infrared spectrum (thin film/NaCl) of compound **274**.

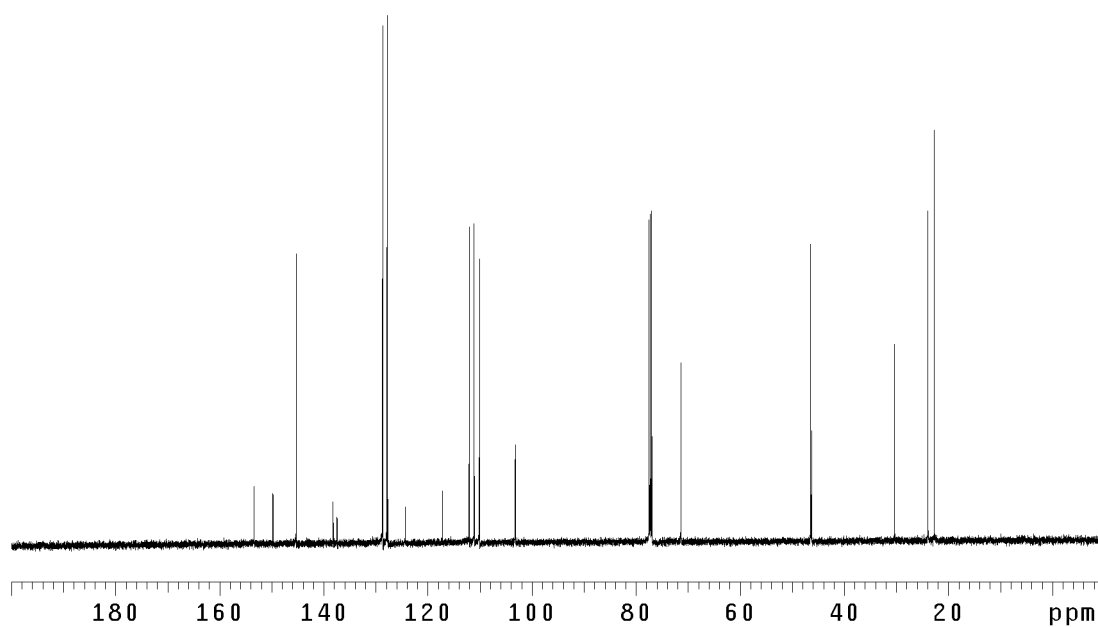


Figure A2.63 ¹³C NMR (125 MHz, CDCl₃) of compound **274**.

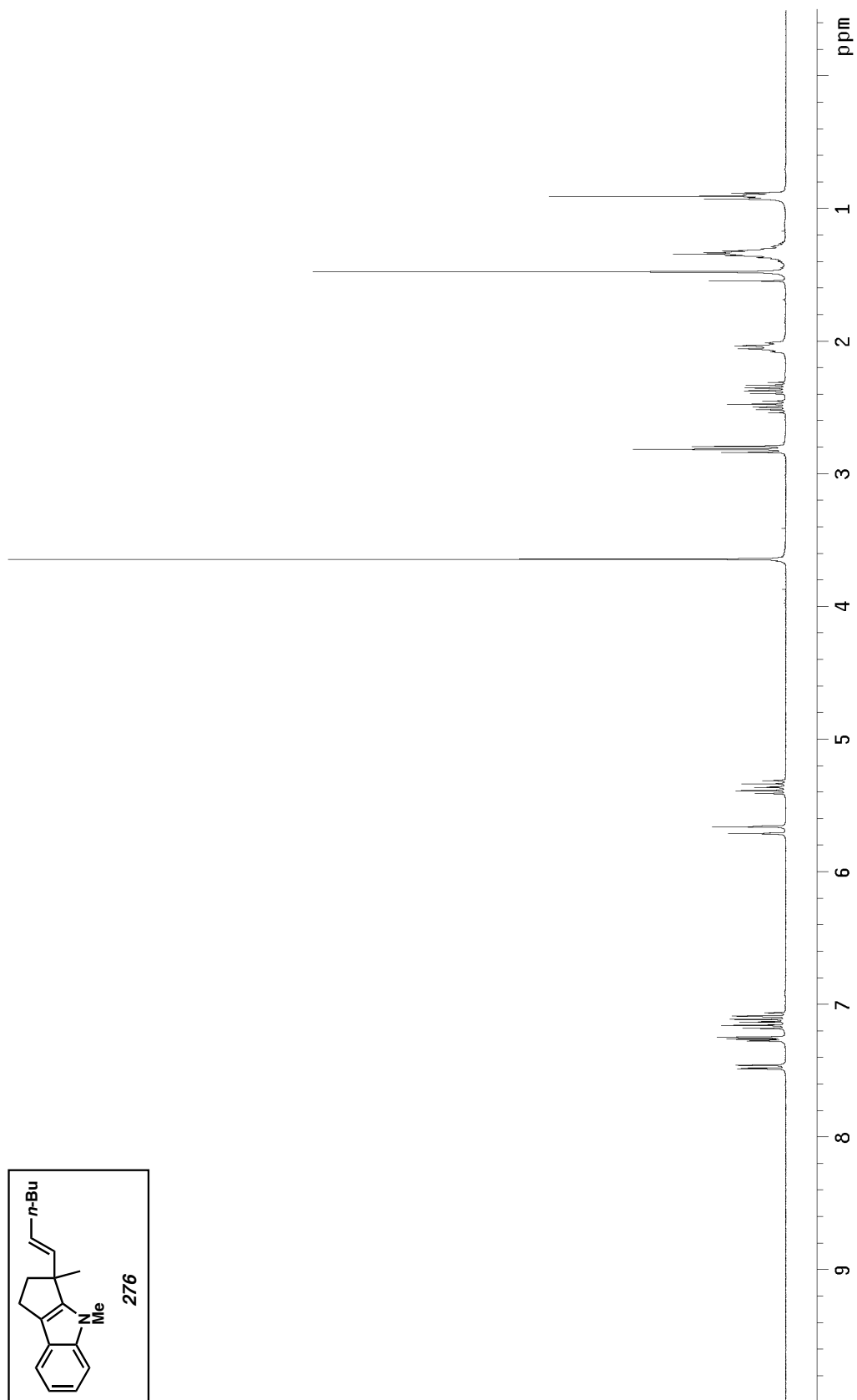
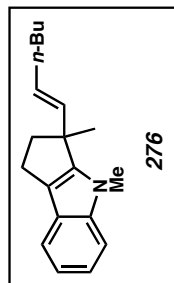


Figure A2.64 ^1H NMR (300 MHz, CDCl_3) of compound **276**.

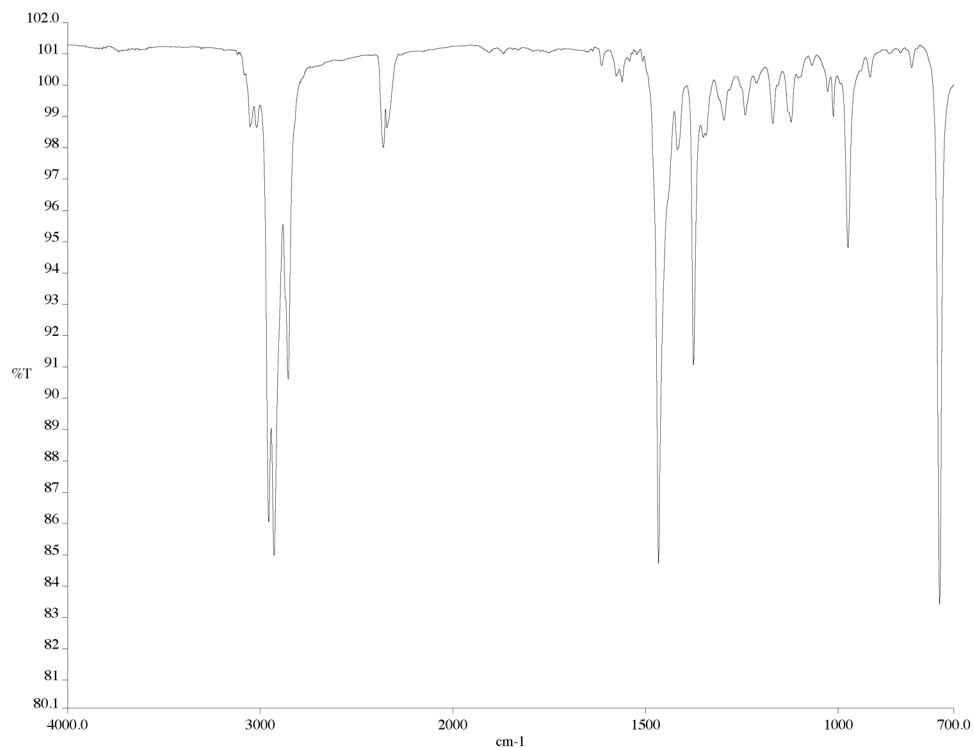


Figure A2.65 Infrared spectrum (thin film/NaCl) of compound **276**.

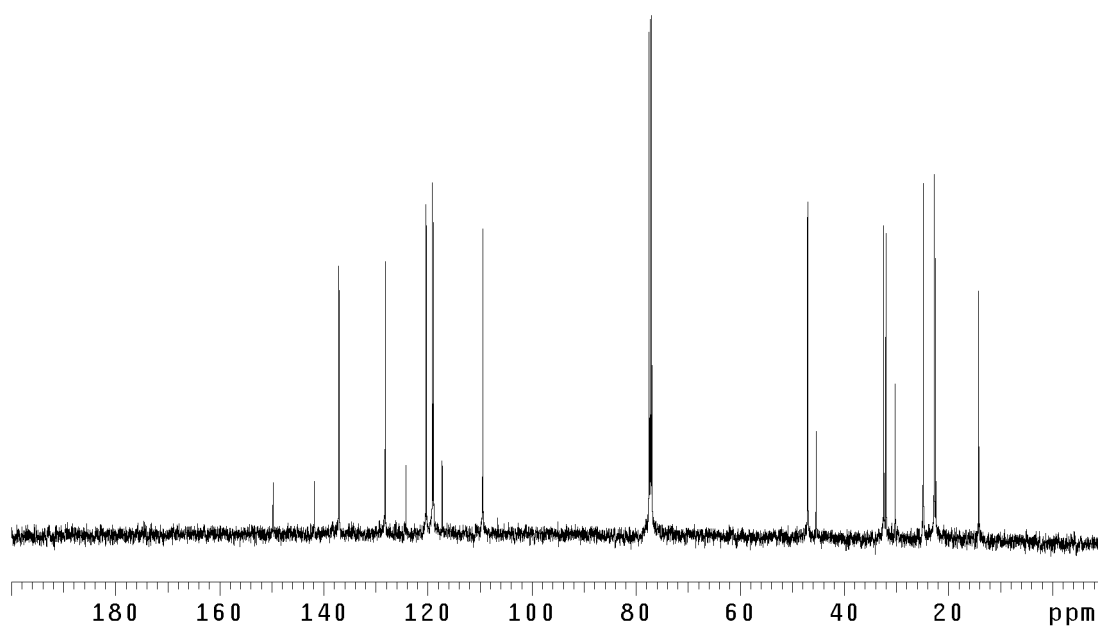


Figure A2.66 ¹³C NMR (125 MHz, CDCl₃) of compound **276**.

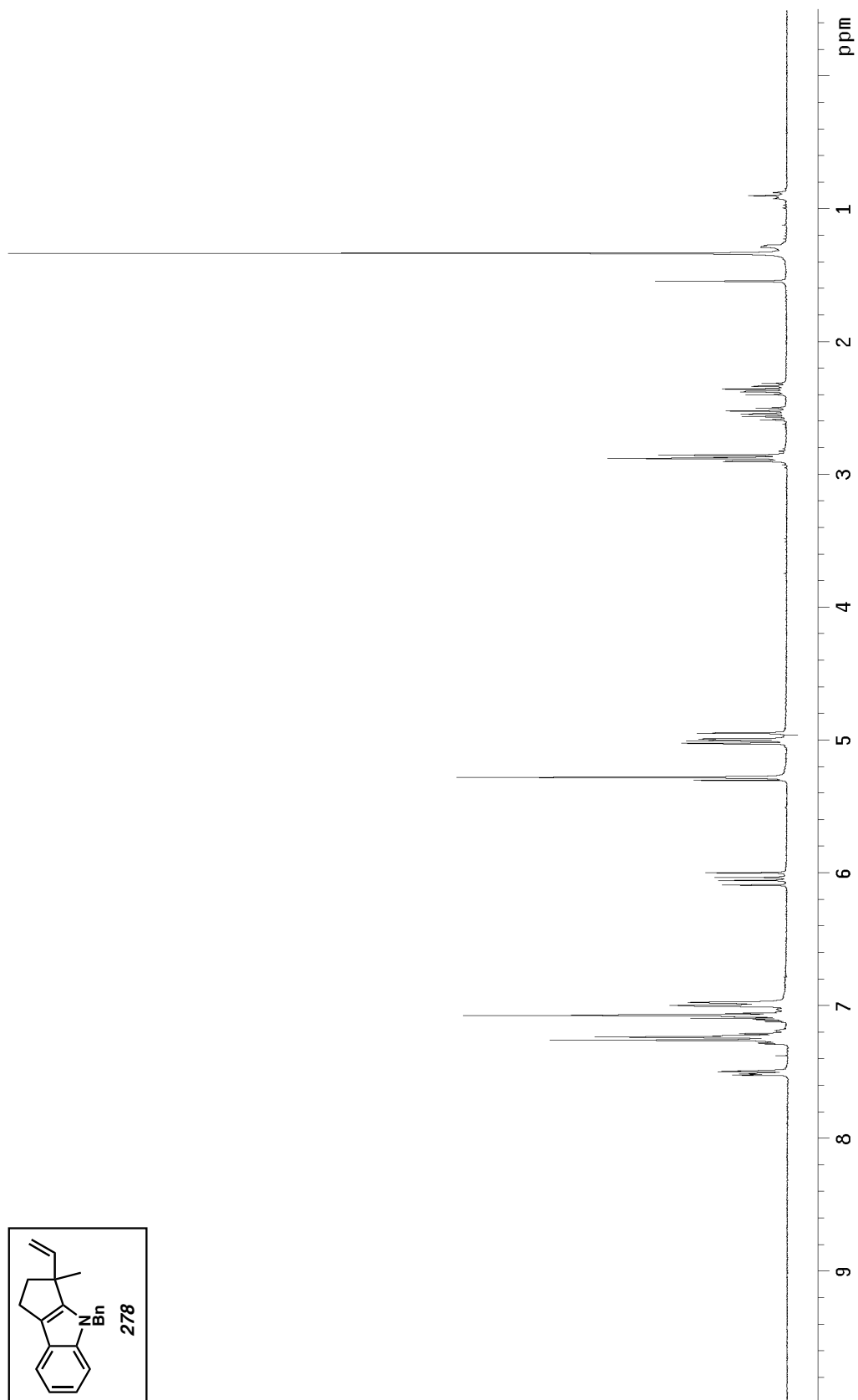
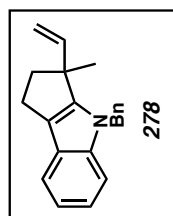


Figure A2.67 ^1H NMR (300 MHz, CDCl_3) of compound **278**.

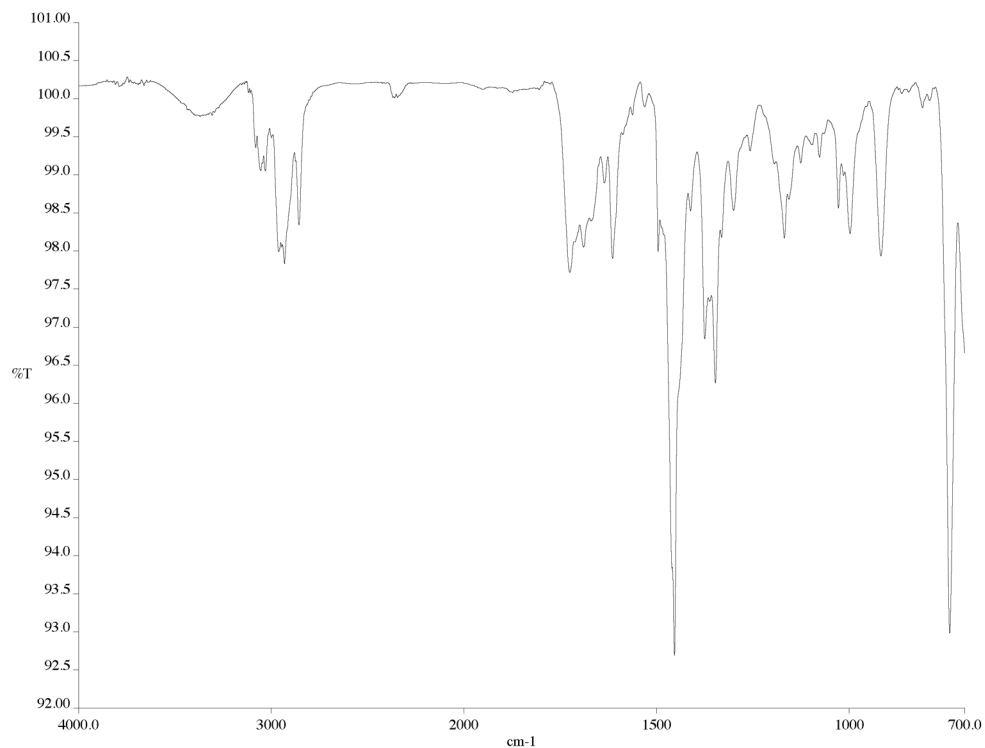


Figure A2.68 Infrared spectrum (thin film/NaCl) of compound **278**.

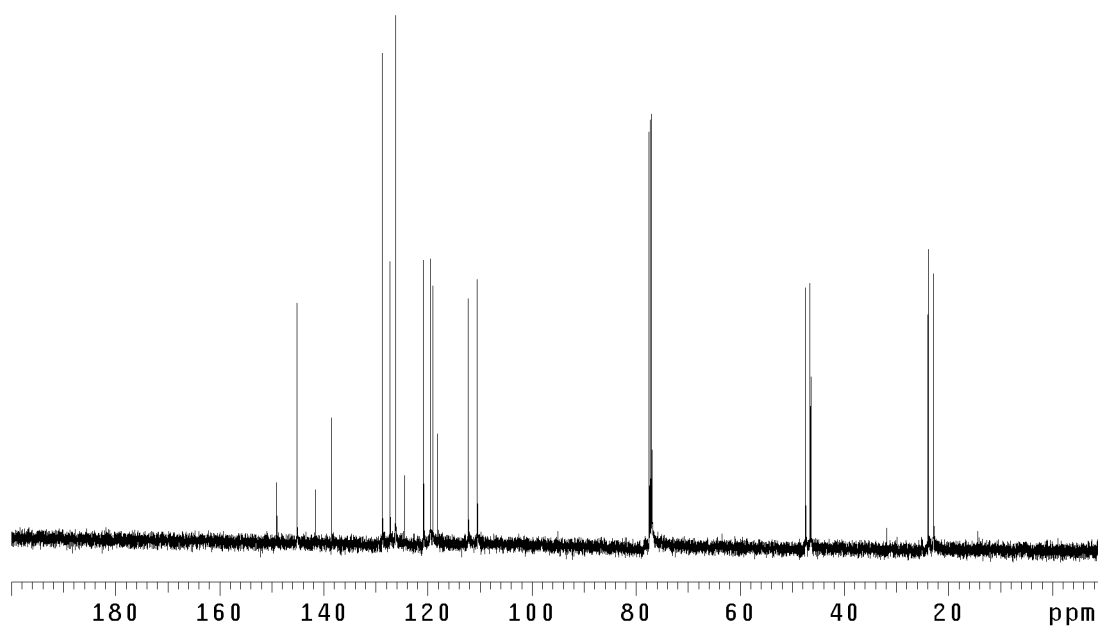


Figure A2.69 ¹³C NMR (125 MHz, CDCl₃) of compound **278**.

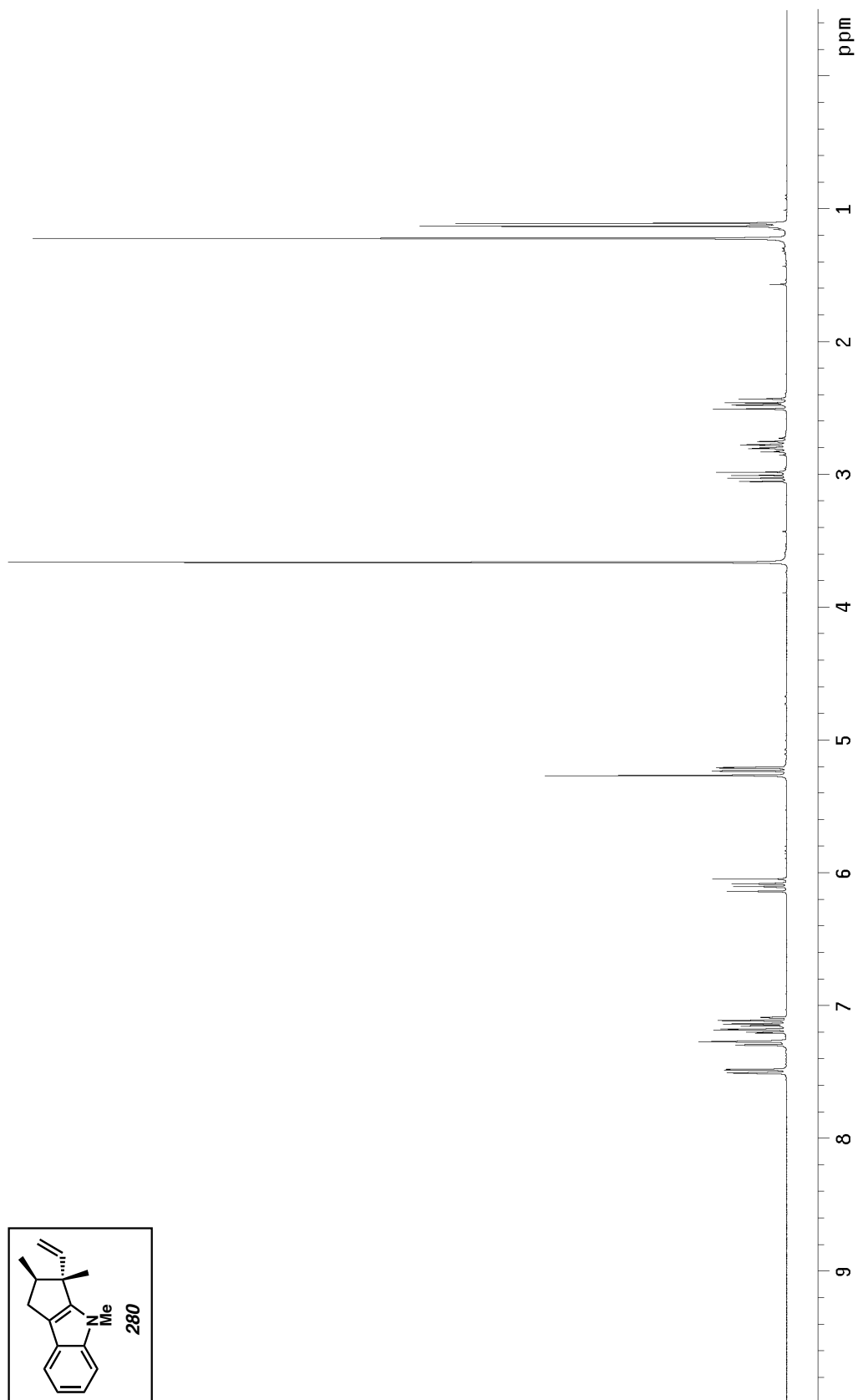
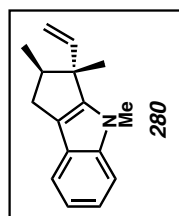


Figure A2.70 ¹H NMR (300 MHz, CDCl₃) of compound 280.

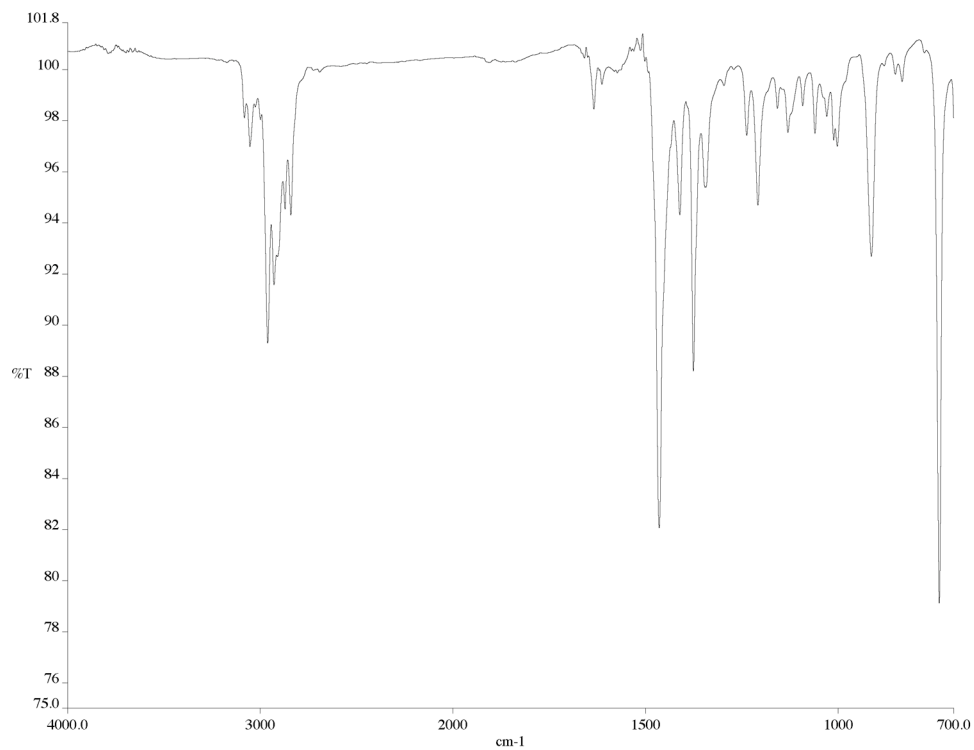


Figure A2.71 Infrared spectrum (thin film/NaCl) of compound **280**.

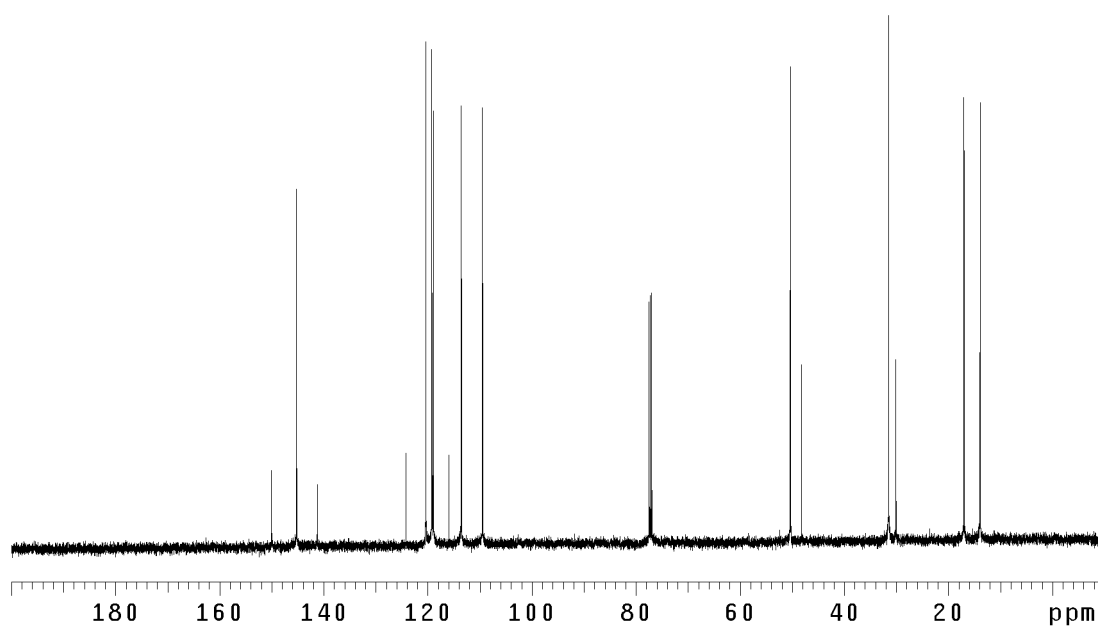


Figure A2.72 ¹³C NMR (125 MHz, CDCl₃) of compound **280**.

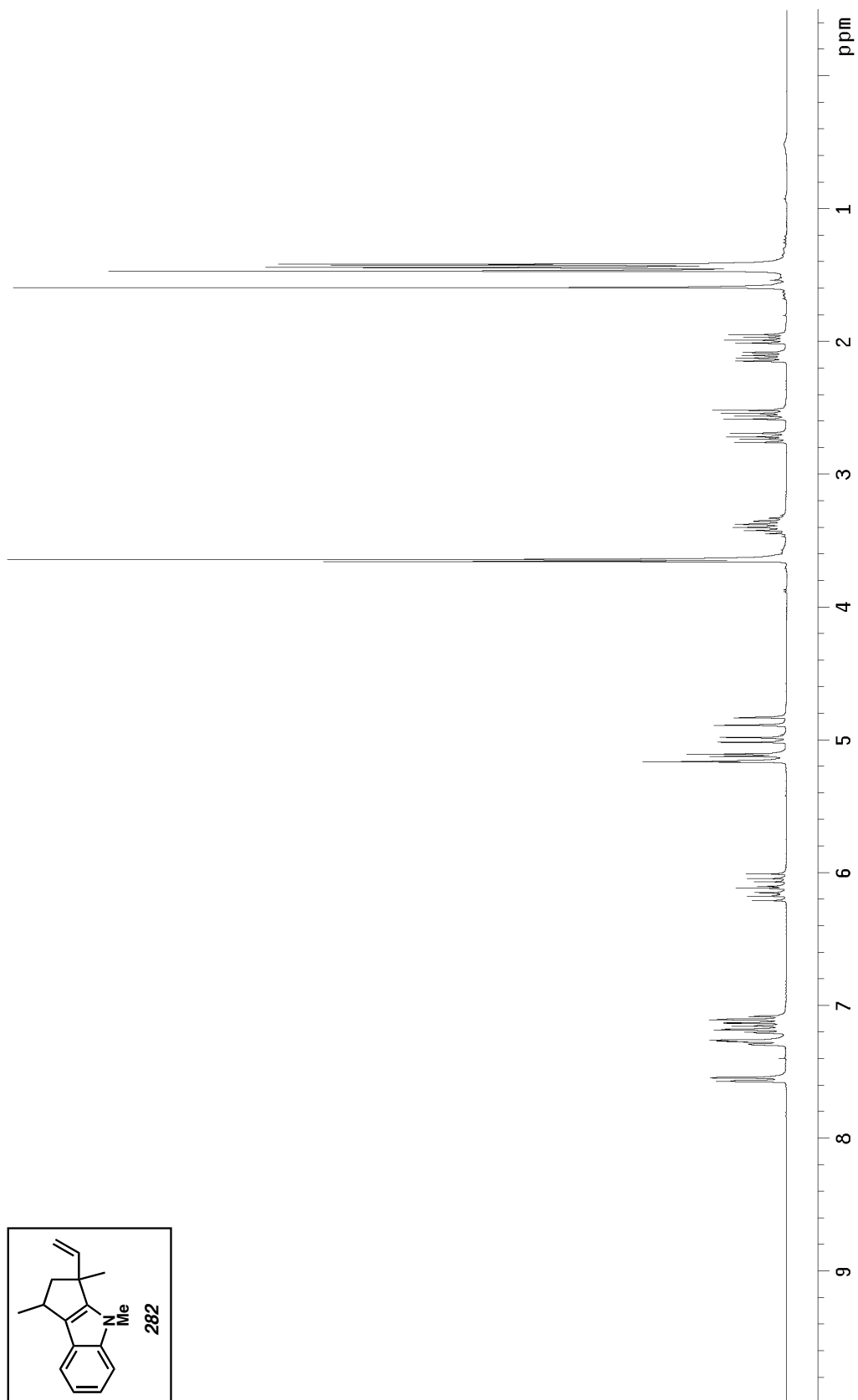
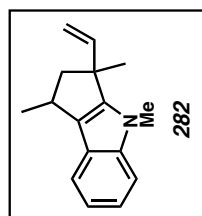


Figure A2.73 ¹H NMR (300 MHz, CDCl₃) of compound 282.

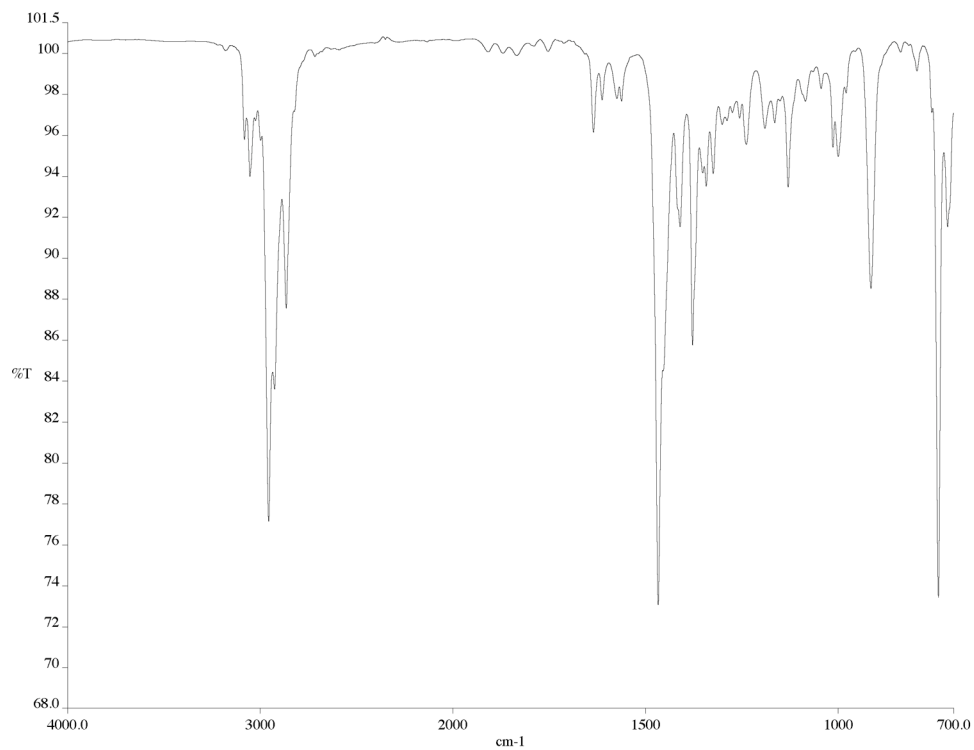


Figure A2.74 Infrared spectrum (thin film/NaCl) of compound **282**.

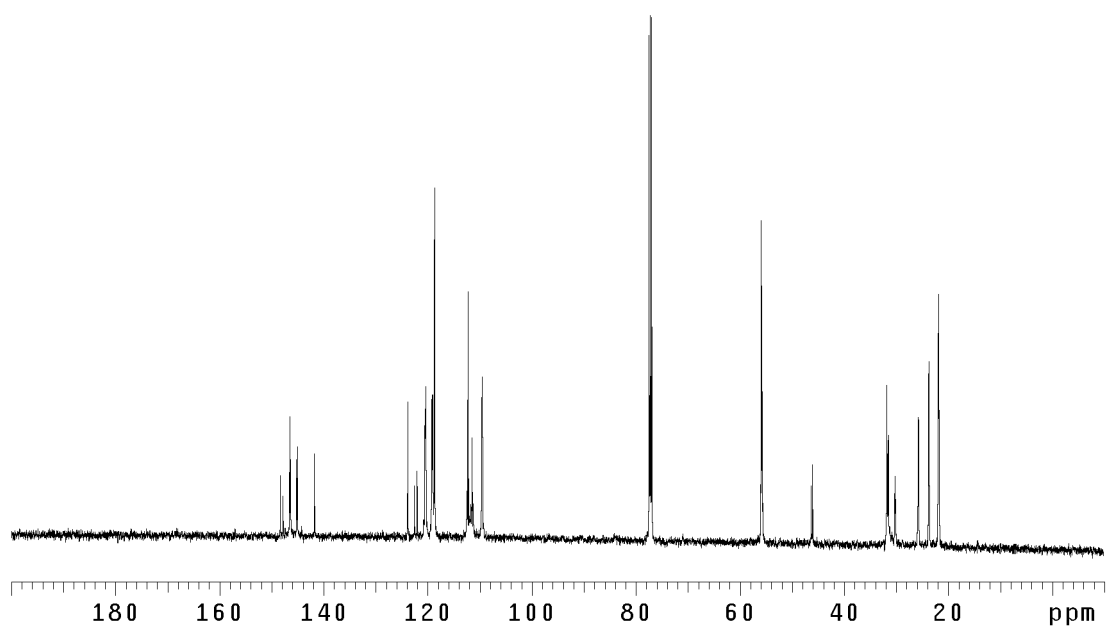


Figure A2.75 ¹³C NMR (125 MHz, CDCl₃) of compound **282**.

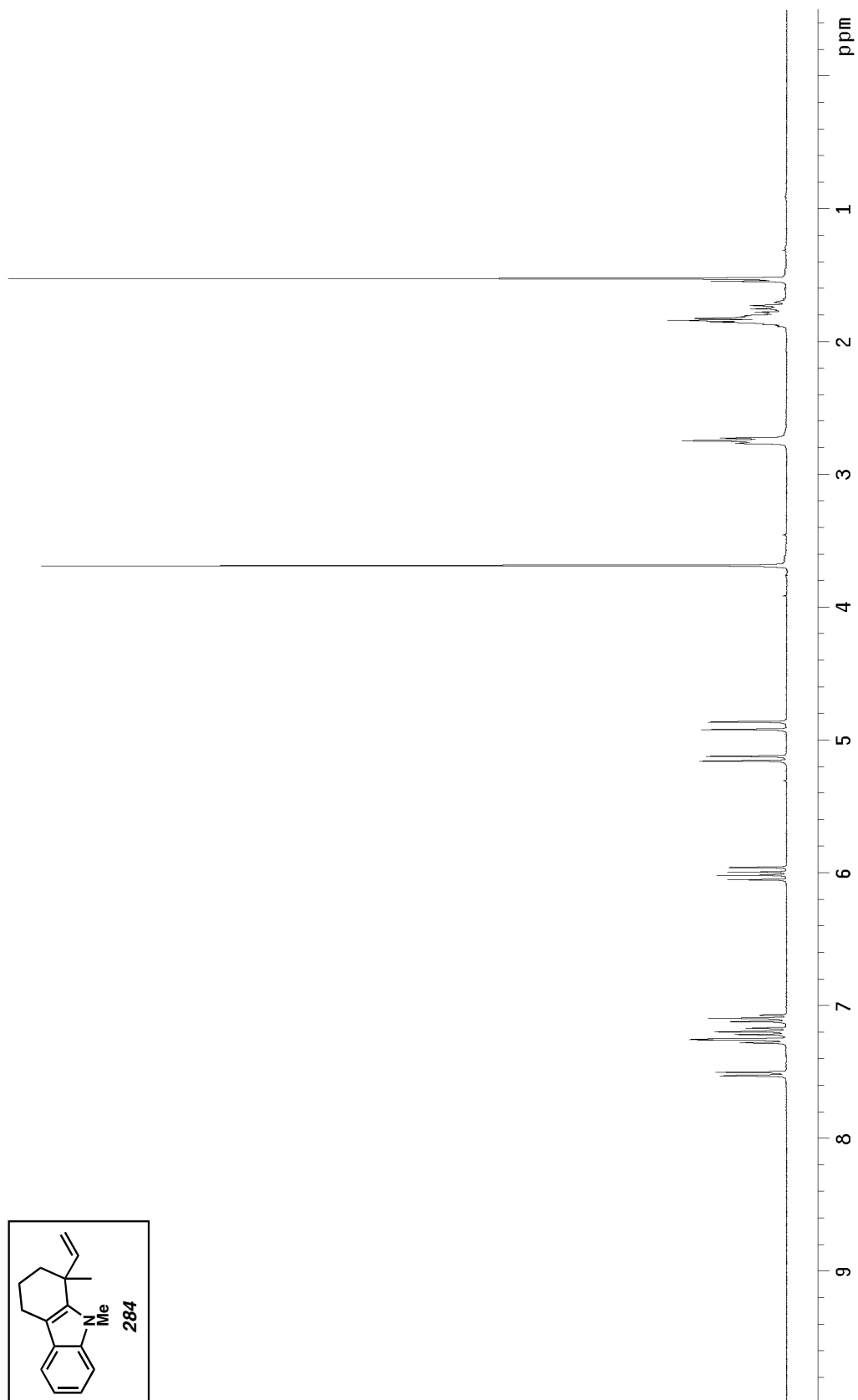
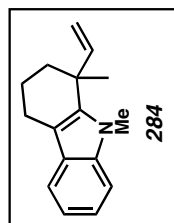


Figure A2.76 ^1H NMR (300 MHz, CDCl_3) of compound 284.

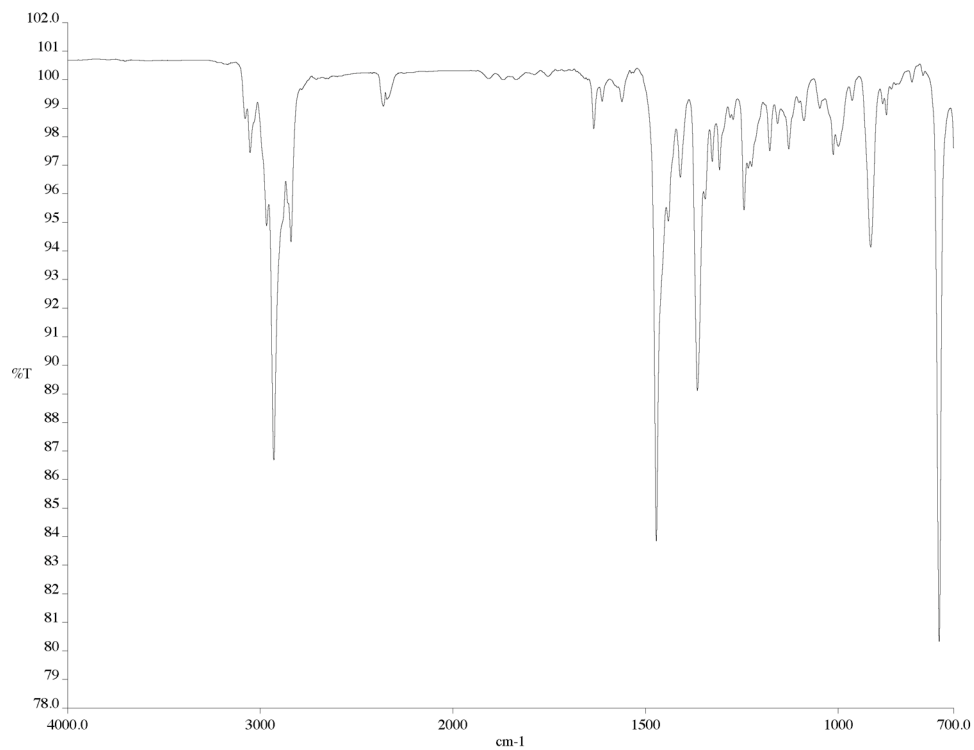


Figure A2.77 Infrared spectrum (thin film/NaCl) of compound **284**.

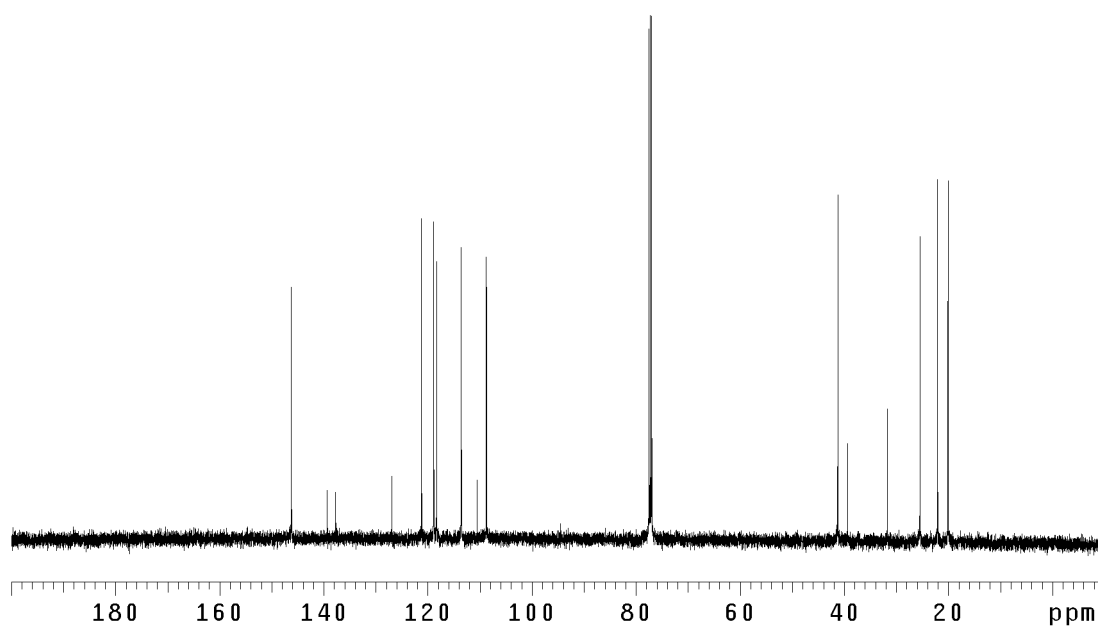


Figure A2.78 ¹³C NMR (125 MHz, CDCl₃) of compound **284**.



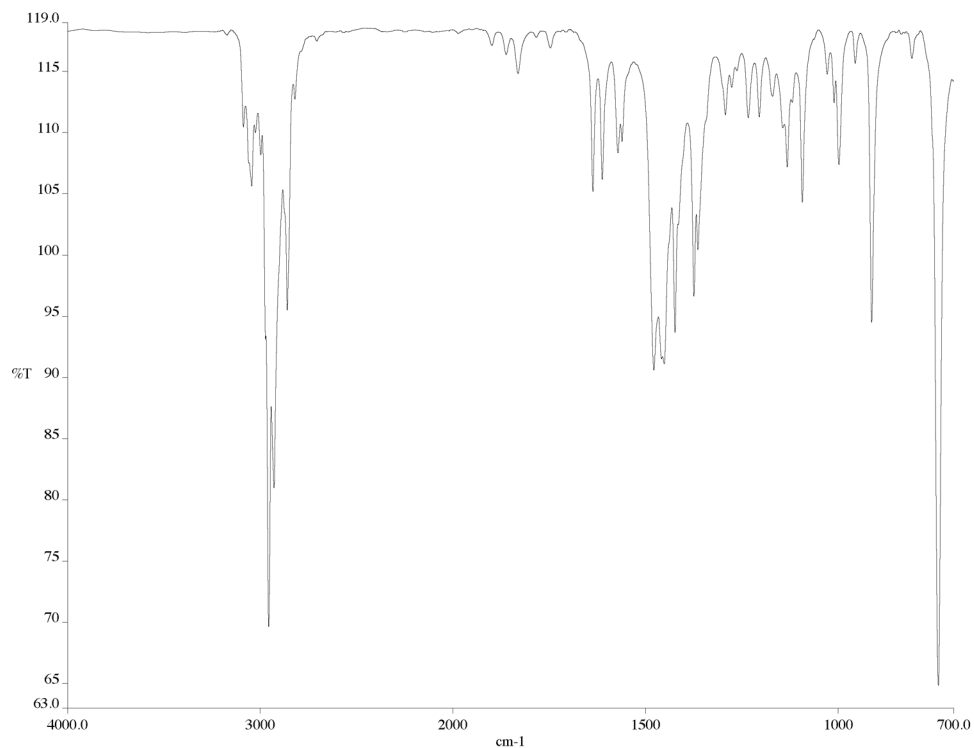


Figure A2.80 Infrared spectrum (thin film/NaCl) of compound **286**.

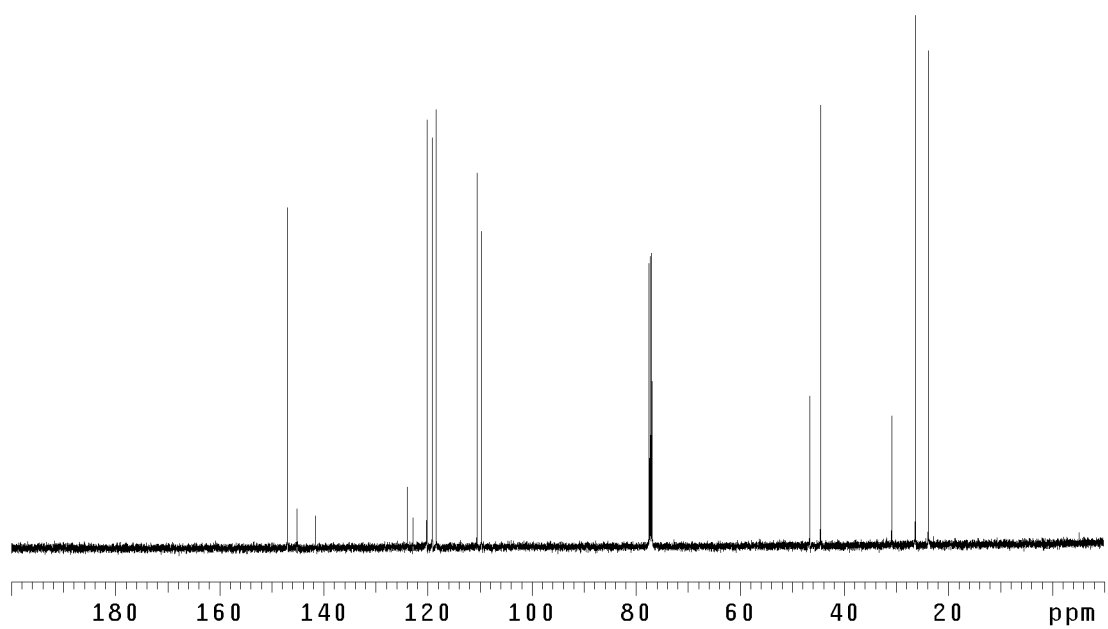


Figure A2.81 ¹³C NMR (125 MHz, CDCl₃) of compound **286**.

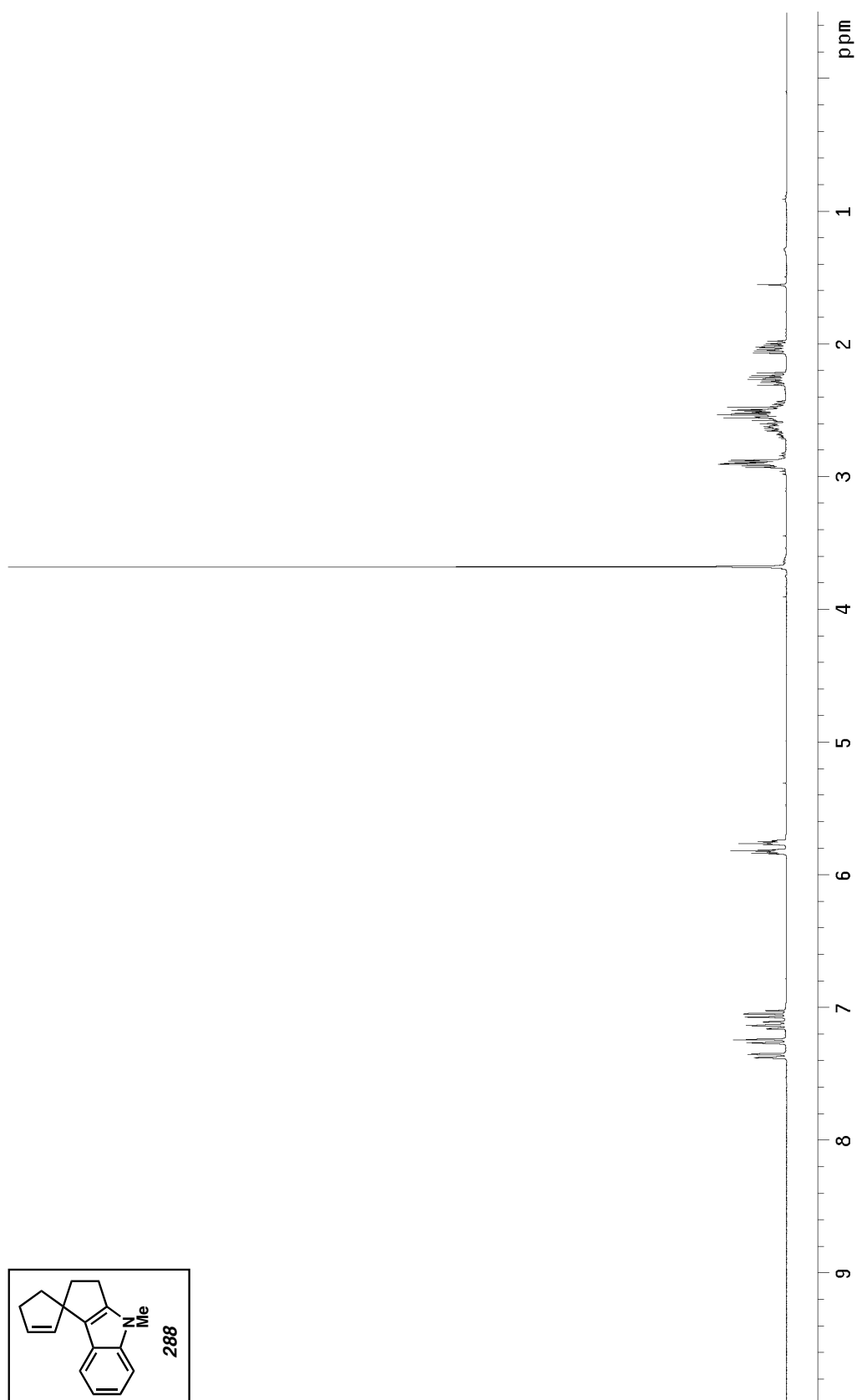
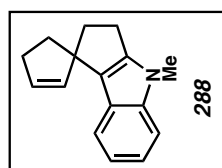


Figure A2.82 ^1H NMR (300 MHz, CDCl_3) of compound 288.

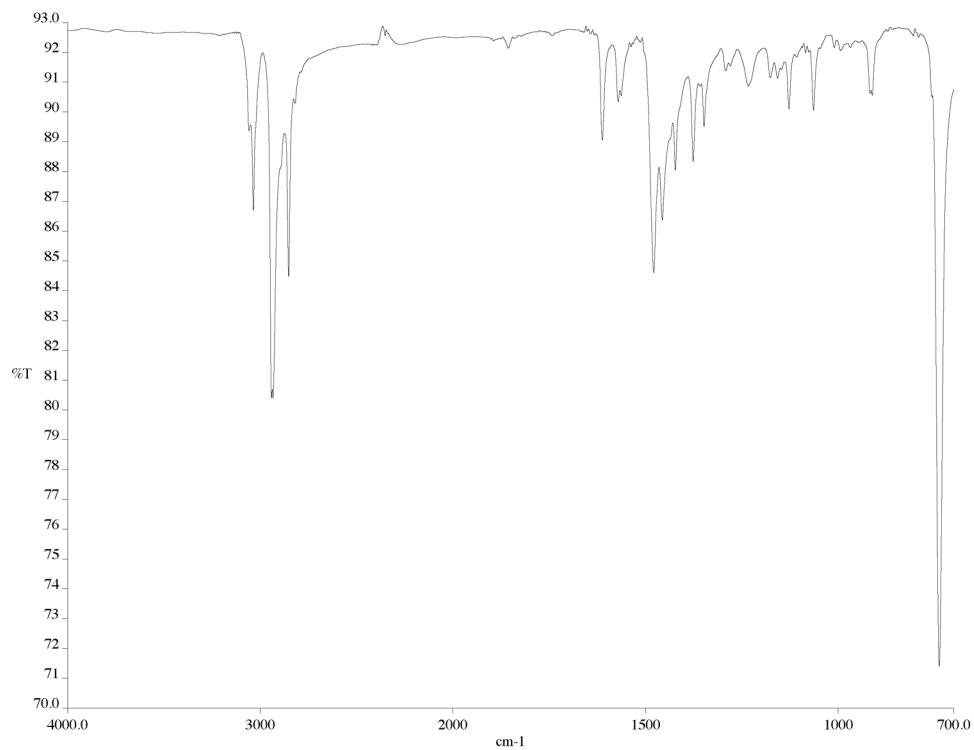


Figure A2.83 Infrared spectrum (thin film/NaCl) of compound **288**.

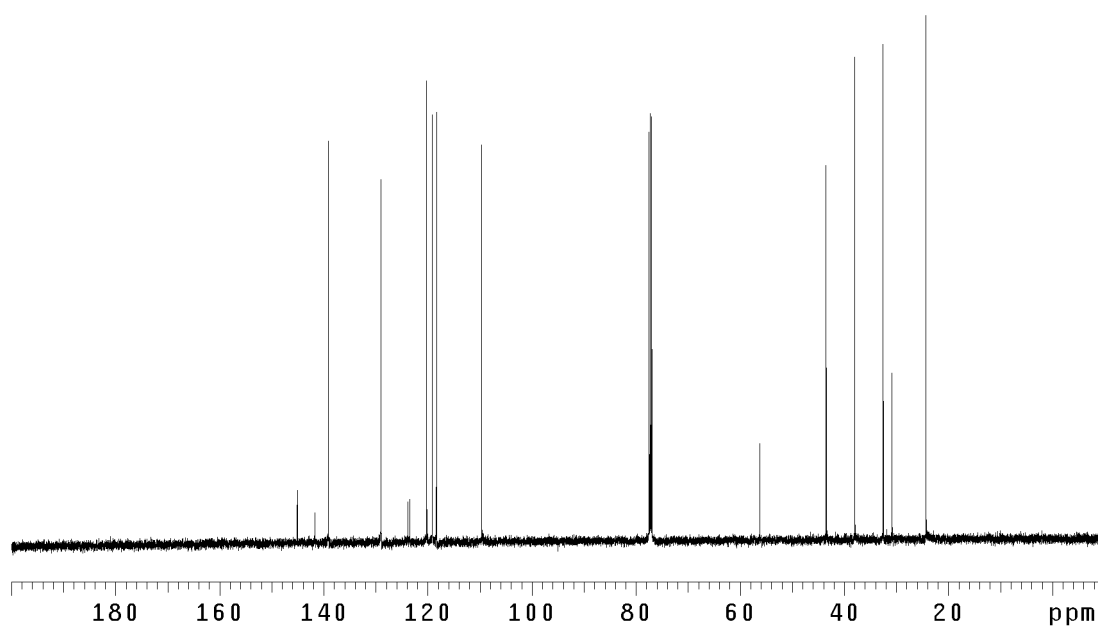


Figure A2.84 ¹³C NMR (125 MHz, CDCl₃) of compound **288**.

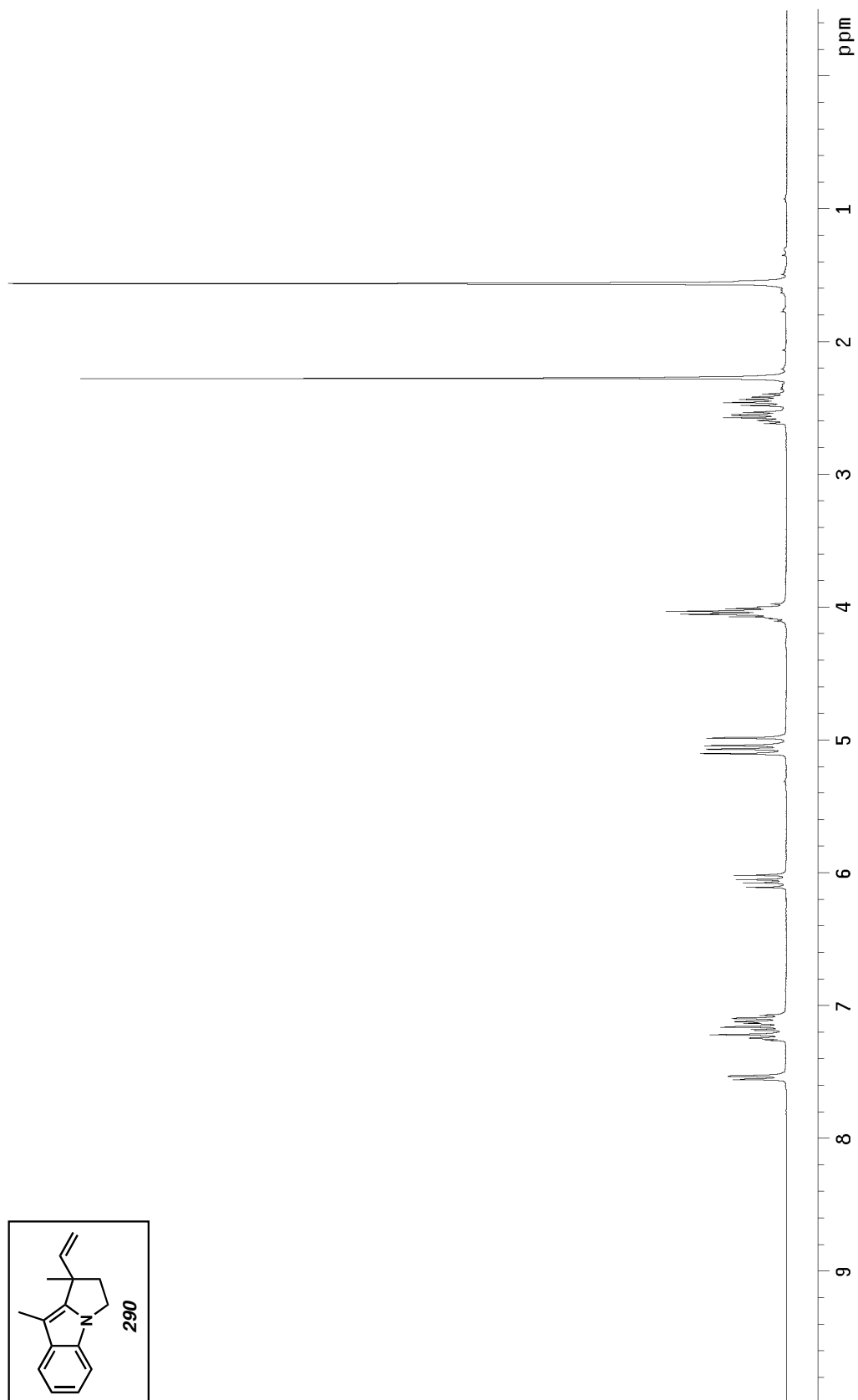
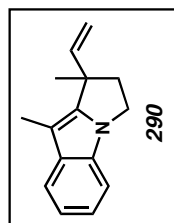


Figure A2.85 ^1H NMR (300 MHz, CDCl_3) of compound **290**.

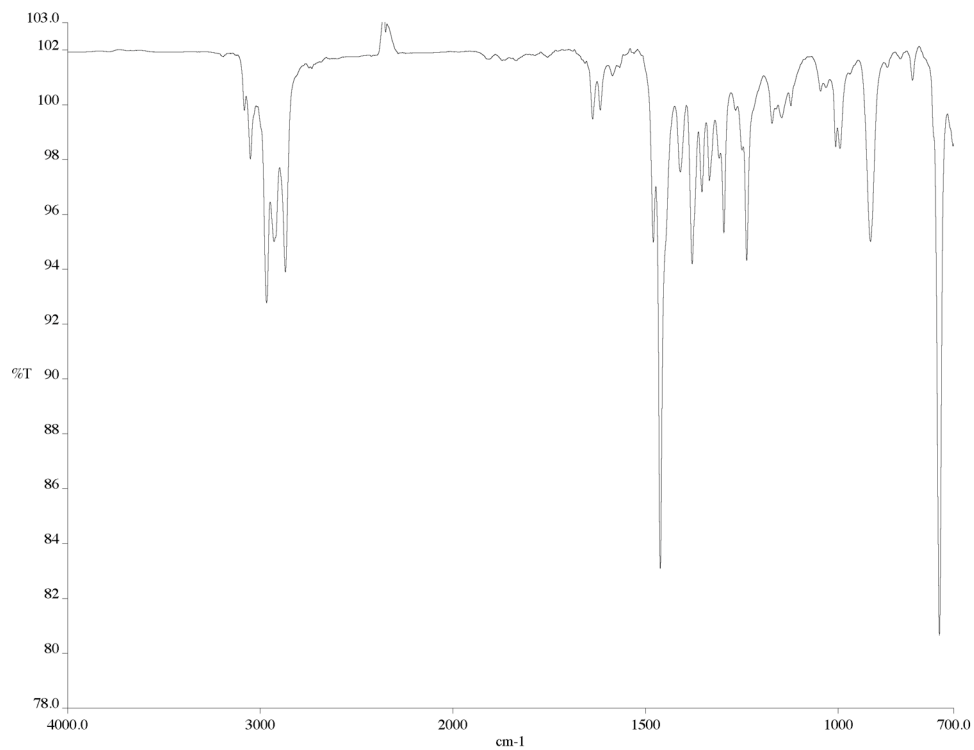


Figure A2.86 Infrared spectrum (thin film/NaCl) of compound **290**.

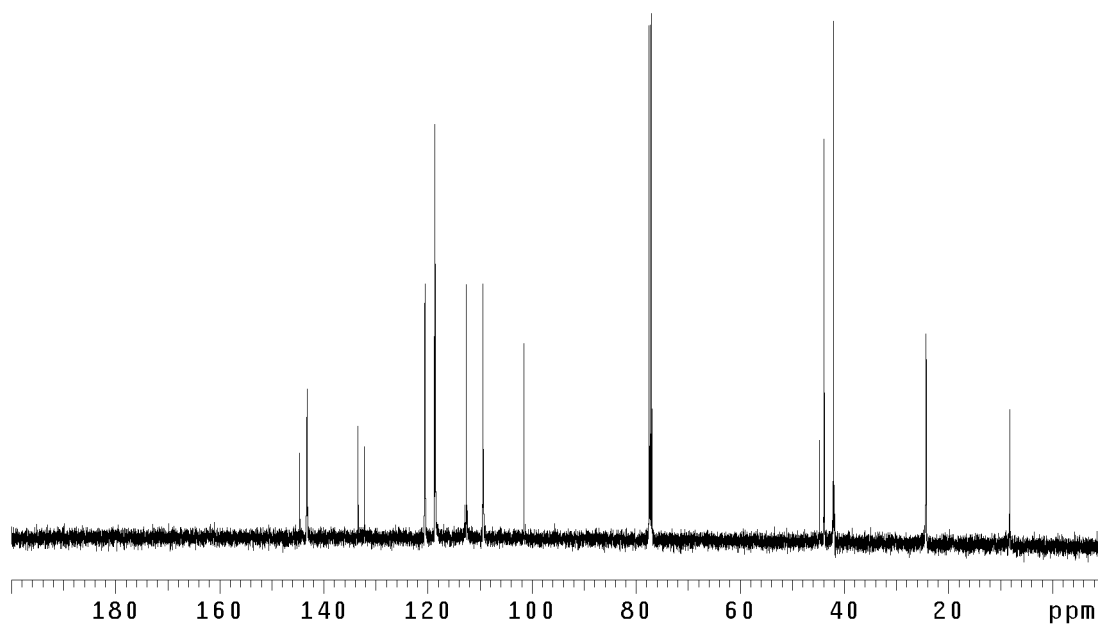


Figure A2.87 ¹³C NMR (125 MHz, CDCl₃) of compound **290**.

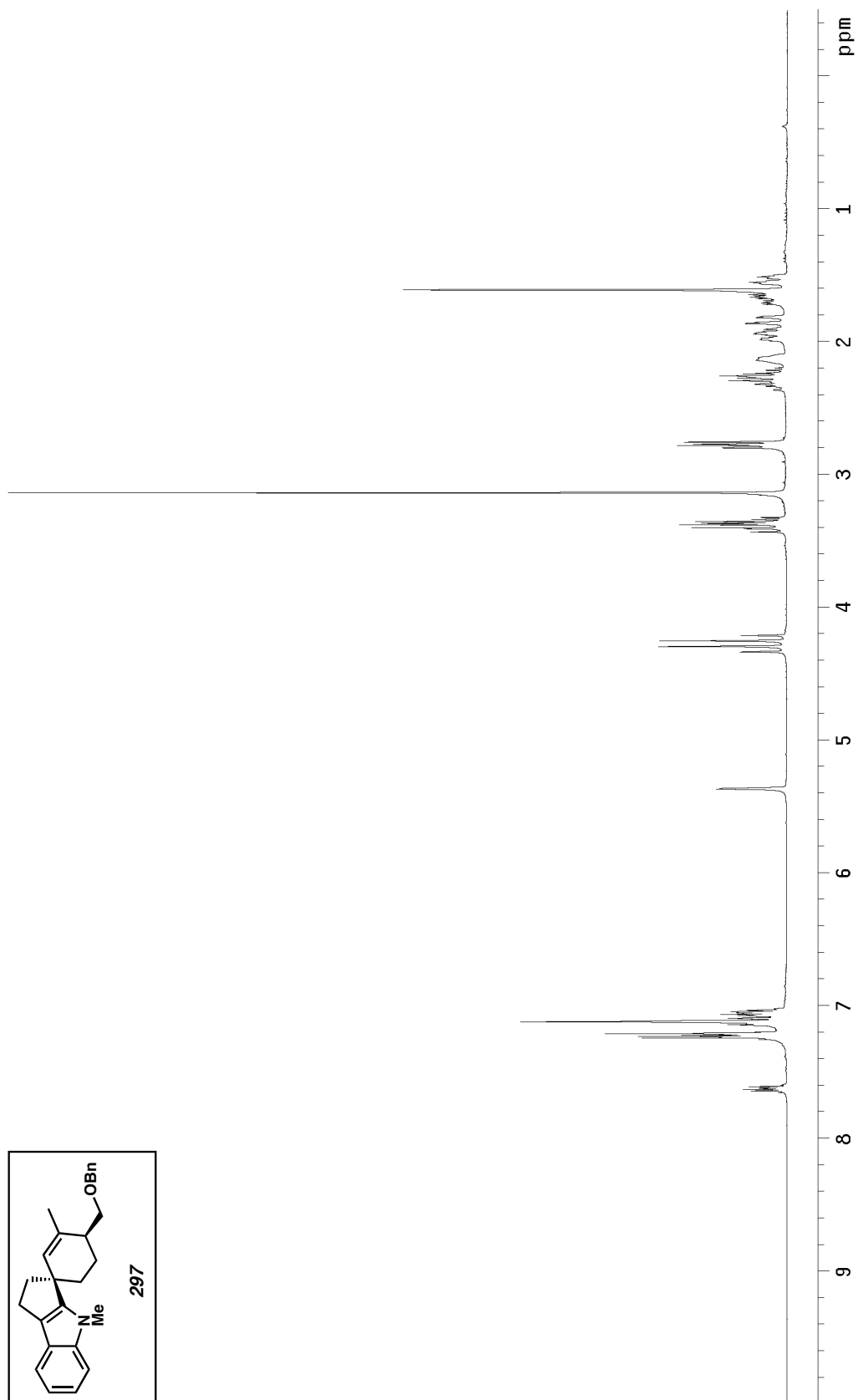
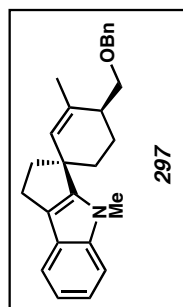


Figure A2.88 ^1H NMR (300 MHz, C_6D_6) of compound **297**.

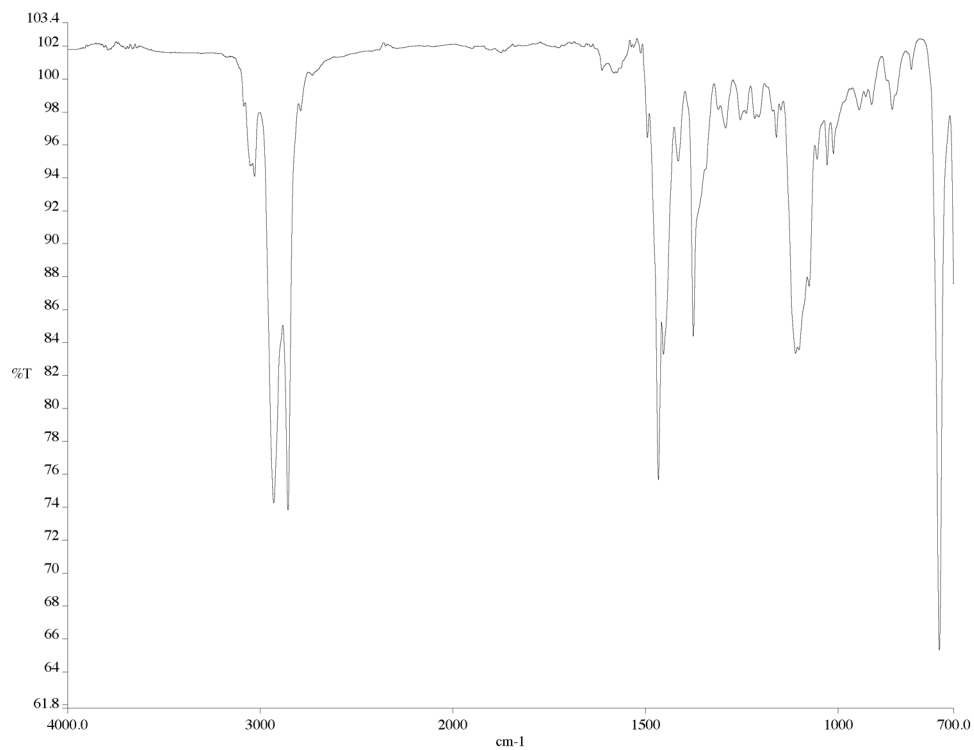


Figure A2.89 Infrared spectrum (thin film/NaCl) of compound **297**.

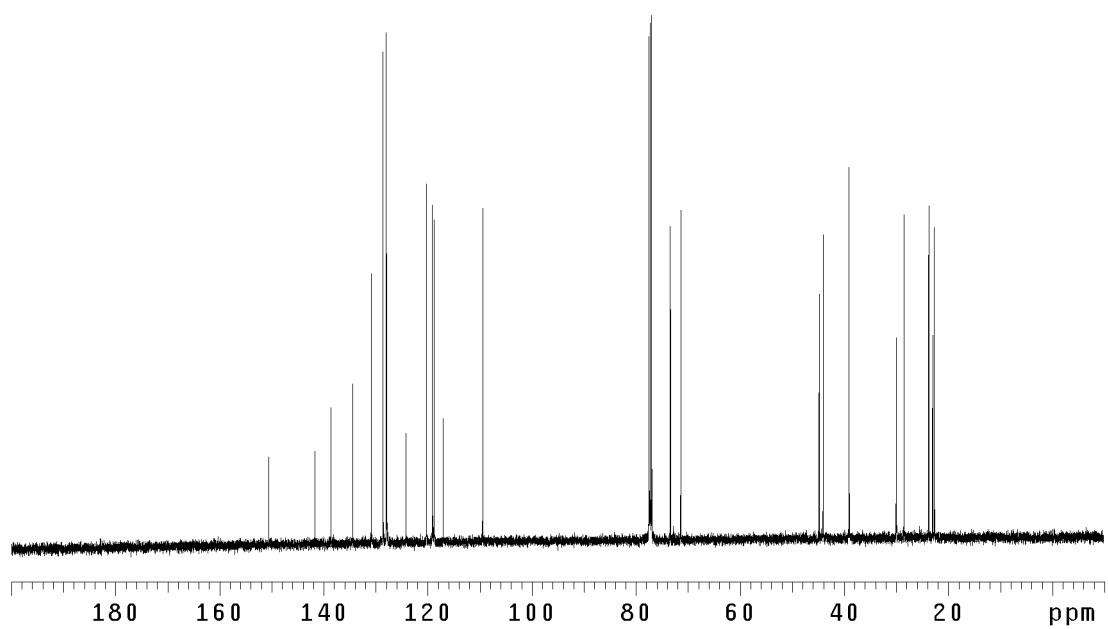


Figure A2.90 ¹³C NMR (125 MHz, CDCl₃) of compound **297**.